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BENJAMIN FRANKLIN

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The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

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The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters).	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
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Breast Feeding.	Instruction for North Carolina Midwives.
Infant Care. The Prevention of Infantile Diarrhea.	
Table of Heights and Weights.	

CONTENTS

Notes and Comment	Page 3
Dr. Franklin	7-16

Notes and Comment

By THE ACTING EDITOR

DOCTOR FRANKLIN

MEASURED by world standards, Benjamin Franklin is unquestionably

one of the greatest men that has been produced by America. His contributions to human well being began when he was a mere boy—who knew what it was to work for a living, to use his ingenuity in devising ways to be useful to his employers and helpful to his associates. Later by his creative imagination and inventive skill, he contributed to the betterment of mankind in hundreds of ways. As an old man, he used his social and intellectual accomplishments to represent the United States in the Courts of the world. But he would have been measured truly great had he made no contributions except those in the field of medicine. Doctor Wright has given us in this issue of the Bulletin a scholarly presentation of Benjamin Franklin's service to medicine and public health. It is also good for this day and generation to get a glimpse into the thoughts of previous generations. We moderns are altogether too prone to assume that practically all of the scientific developments which we use today are the products of this marvelous age in which we move. A glimpse into the past will remove a great deal of our conceit and make us humble in the presence of true greatness. We commend Dr. Wright's paper to our readers with the feeling that when they finish reading it they will have a more comprehensive understanding of the multitude of health problems as well as the accomplishments which time has wrought.

We should also have a keener appreciation of our indebtedness to previous generations.

* * *

SMALLPOX

We would select for emphasis the paragraphs in Doctor Wright's article which deal with Franklin's discussion of smallpox and inoculation as a means of dealing with it. According to history, smallpox was first recognized in India and China at a very early period. The disease traveled westward and was brought to Alexandria in Egypt about 640. The first epidemic of this disease in Europe occurred in the latter part of the sixteenth century. It was so common during the seventeenth and eighteenth centuries that an adult person that had not had smallpox was a rarity in the United Kingdom. Everyone expected to have the disease at one time or another. Since smallpox was considered to be inevitable, thinking people considered it advisable to have the disease at a time or season of their own choice, therefore, the method of transferring smallpox deliberately and intentionally by means of inoculation offered a solution. Inoculation is said to have been practiced in India for more than a thousand years before the birth of Christ. It was not used in England until 1717 when Lady Montague, the wife of the British Ambassador at the Ottoman (Turkish) Court had her little son inoculated in March of that year. The procedure slowly increased in popularity although faced with much fear. Inoculation of smallpox was introduced into America during

the smallpox epidemic in Boston in 1721. Franklin unhesitatingly joined in the controversy as a capable advocate of a worthwhile public health procedure. His statistical studies of the disease are a definite contribution to vital statistics and epidemiology. It was not until 1780 that Edward Jenner began to study smallpox and it was not until May 14, 1796, six years after Franklin's death, that Jenner performed the famous vaccination of an eight year old boy, James Phipps. Our present freedom from smallpox, explainable largely by the use of smallpox vaccine, makes it somewhat difficult for the people of today to comprehend the seriousness of smallpox in Franklin's time. We should realize, however, that smallpox still exists and that it can return as a public health problem of greatest magnitude if we were to relax our efforts and discontinue the use of smallpox vaccine. Smallpox can be the same scourge to mankind in the future that it was in Franklin's time.

* * *

AS AN OLD MAN

Another lesson which we can learn from Franklin is that he had a remarkable record of accomplishments as an old man. He was seventy years of age in 1776 when the American colonies began their fight for freedom. His service during the last fourteen years of his life would have placed him in the Hall of Fame, if he had accomplished nothing prior to that time. His interest never flagged. He adapted himself to his physical condition and today represents a shining example which could be imitated advantageously by all elderly people. By devising bifocal glasses he solved a problem for all those elderly people who need visual aids to see clearly those objects both near and far from their eyes.

* * *

THE AMERICAN GERIATRICS SOCIETY

During the Atlantic City meeting of the American Medical Association a new society was created. This society should be

of interest to all persons past 60 years of age. Two North Carolinians played an important part in the organization of the American Geriatrics Society, Dr. Wingate Johnson of Winston-Salem, and Dr. James M. Northington of Charlotte. An editorial in the September issue of the North Carolina Medical Journal states:

"The purpose of the organization is 'the study of diseases of advancing years: preventive and curative treatment.' The constitution provides that 'The members of this organization shall be graduates of recognized medical schools who are especially interested in this subject. They must be members of the state medical society.'"

* * *

DR. MALFORD W. THEWLIS

When we realize that life expectancy is increasing and that if present trends continue, it will only be two decades before there are as many people in the age group past sixty as there are now in the group less than ten years of age, the importance of the study of the problems of the aged becomes more apparent. An interesting paper by Dr. Malford W. Thewlis of Wakefield, Rhode Island, appeared in the November 7th issue of the Journal of the American Medical Association. Many of Dr. Thewlis' statements seem to be both timely and interesting. We quote as follows:

"Geriatrics was not spontaneously recognized as a special branch of medicine; like pediatrics, it met with slow response. When Abraham Jacobi gave the first course in pediatrics in 1859, it was coolly received; the medical profession had to wait thirty-seven years for a text book on diseases of infancy and childhood.

"The word geriatrics was coined by Nascher in 1909, and five years later he completed a text book on diseases of old age, which went through a second edition in 1916 . . . In wartime, when the armed forces absorb a large proportion of the male youth, there is an increasing need for older men who are fit and can till the land or work in offices and

factories, replacing selectees. In Germany the elderly and the children often work side by side in munitions plants, while in our country many able bodied men are perforce idle because they have not yet been fitted into the pattern of total war. In the Ford plant, however, men of 75 are earning and producing, and room is found for persons handicapped by asthma, arterial hypertension or arrested tuberculosis, and even by such gross physical defects as blindness or by loss of limbs. Ford opened the first industrial rehabilitation clinic and paved the way for industrial groups interested in social and economic problems. In 1940 there were about thirteen million persons past 60 in the United States, over nine million of whom were over 65. Few among them are self supporting, and many are dependent on small pensions. Most have surrendered and believe that they can no longer pull their own weight . . . A physician genuinely interested in geriatrics does not necessarily work in hospitals and clinics. Some physicians in rural areas are doing scientific work in their own offices which they use as clinics and laboratories . . . Much is learned at the bedside. For every seriously ill old person who consults a physician there are a hundred with simple ailments causing discomfort which may precede actual disease. Physicians are often baffled by simple ailments, and surgeons are disconcerted when forced to treat ambulatory patients without hospitalization.

"A small town general practitioner is in a favored position because continuous clinical studies are possible. City practice is often transient and seldom enables one to watch families as closely as it is possible in a smaller community where heredity and environmental factors are known; the influences of those factors on several generations are often obvious.

"No specialty in medicine can be approached as easily as geriatrics. But, to be successful, a geriatrician must be genuinely interested in the elderly and willing to study his patients thoroughly. He must not overlook

pathologic changes in the aged and must resist the temptation to restore the old to a state normal to maturity. They must function at their own level. An understanding of the senescent organism is necessary to treat elderly patients with some degree of success. Over-enthusiastic treatment must be avoided.

"Preclinical medicine is a logical approach to the prevention of diseases of old age. It deals with pathologic processes likely to occur, such as peptic ulcer, diabetes mellitus, pernicious anemia, arterial hypertension and arterial degeneration.

"Preclinical medicine includes a study of premature degenerative changes. If these can be determined, it may become possible to eliminate influences which hasten disintegration. The goal of preclinical medicine is the study and interpretation of preclinical states, disease soils, constitutional factors, conditioning periods and disease tendencies.

"The principles of preclinical medicine clearly apply to persons in the late forties and early fifties. Preclinical studies should be done early enough to allow timely intervention, since late intervention is seldom successful. Preclinical therapy can attack the disease 'soil' long before the symptom stage is reached.

"The process of deterioration which is called aging is hastened or retarded by two dominant factors, heredity and environment. From the preclinical standpoint they are certainly the most significant.

"A diagnosis of specific vulnerability to disease is based on a study of the patient as a whole and includes a study not only of the hereditary background but of constitutional types, racial factors, intellectual equipment, racial adjustment, reaction to climate, occupation and past diseases. Careful history taking is as essential and necessary as a thorough physical examination.

"Preclinical medicine is closely linked with geriatrics and goes a step further than preventive medicine, which deals with the prevention of communicable diseases. As stated before, preclinical medicine deals with pre-

disease states—the 'soil' on which disease develops. Since many of these disease 'soils' are not detected until later in life and are a result of hereditary and environmental influences, they often appear in the geriatric period of life. Many persons do not consult a physician for a check-up until they reach the age of 50. Thus the geriatrician becomes a preclinician.

"The actual prevention of diseases of old age while in their incipience is covered by preventive geriatrics. Industrial medicine is helpful, and of course the general practitioner has rare opportunities to prevent disease . . . The person with diabetes is told how to avoid complications. Warning against such common hazards as slippery floors, sliding rugs and walking on slippery pavements may prevent fractures . . . Avoidance of sudden strain (lifting heavy objects, shoveling snow, running for a train) may postpone an attack of coronary thrombosis.

" . . . Tuberculosis is not rare in old age, and its prevention is necessary in senescence as in childhood. General hygienic measures, mental hygiene and proper nutrition are also important in advancing years. These are only a few of the countless preventive measures which the practitioner may apply in the course of ordinary medical practice.

"A more optimistic attitude toward surgical intervention in the aged is to be hoped for. Records show that major operations on persons ranging in ages from 80 to 100 often have been successful. One should not hesitate to operate on old persons if there is a chance of prolonging life and restoring comfort. Many elderly patients suffer exceedingly from gallstones, prolapsus uteri, brain tumor, cancer, hypertrophy of the prostate gland and a number of other diseases. Should they be denied the relief surgery offers? It is interesting to watch elderly patients whose every organ seems diseased undergo a major operation and live usefully several years after."

In discussing this paper Dr. Lucien Stark, Norfolk, Nebraska, stated:

"Geriatrics will soon become an important

phase of the practice of medicine . . . Successful treatment of the aged must be based on getting them to adapt themselves to the condition of their blood vessels, musculature and secretory mechanisms rather than making these things conform to the ideas of the patient. Excessive use of coffee and tobacco are not the best thing for blood vessels, but to take coffee and tobacco away from some old persons who have used them for a long time makes them think they are being punished rather than being treated."

Dr. Wingate Johnson of Winston-Salem, North Carolina, commented in part as follows:

"Years ago an elderly friend made an observation that one grows older not by an inclined plane but by steps . . . The observation by Hippocrates that 'all great changes, either one way or another, are hurtful' applies particularly to older people. I do not agree with Dr. Thewlis that 'the aged are seldom willing to go to hospitals.' A great many find a visit to the hospital something of an adventure; and if the nurses and resident staff are tactful in dealing with them, often they will look back with pleasure to their hospital experience. I agree with Dr. Thewlis's views on surgery for older patients. Often a comparatively simple operation gives such patients a new lease on life; and it is quite true that they stand operations surprisingly well."

From Dr. George M. Levitas', Westwood, New Jersey, comments we select the following:

"Because we have done everything to make people live longer we should make their lives pleasant, comfortable and worth while."

If the tuberculosis death rate of 1912 had continued until now, more than two million additional people in this country would have died of tuberculosis in the last 30 years.

Some men who are turned down by the Army because of tuberculosis are going to work in munitions plants after they have been cured of the disease.

Dr. Franklin

By ROBERT D. WRIGHT, M. D.
Division of Epidemiology
North Carolina State Board of Health
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ONLY occasionally in the history of the human race has there occurred the miracle of a man whose interests were as unspecialized as his powers were prodigal. For these rare men of genius the mechanism of social machinery, the physical explanation of a soap bubble, the mystery of the human body, the creative arts, the riddle of the universe, could each in its turn hold equal fascination. Wherever they turned their eyes new light fell. To some, these lonely giants are the flower of an epoch; for others, they are the seed. Ancient Greece had Aristotle; the Renaissance, Leonardo Da Vinci; our era, Benjamin Franklin.

January 17th is the 236th birthday anniversary of this first American scientist whom millions of his countrymen unfortunately remember only as the frugal school boy who rose to riches by temperance and industry, to fame by capturing lightning with a kite, to eminence by some hazy activity in the founding of our nation. To many of us, as a pioneer in medical knowledge he is not known at all.

No Doctor of Medicine was Benjamin Franklin, but his knowledge of the subject and contributions to it were far greater than those of many of his contemporaries who laid claim to the title. It is probably not inaccurate to say that we would know Franklin today as the father of American medicine had he not been so eminent in other fields.

The medical profession may claim Franklin as one of its own for he was a member of the Royal Medical Society of Paris and an honorary member of the Medical Society of London, in addition to holding membership in several medical societies in the United States.

As a champion of fresh air, exercise, and

frequent bathing he stands as an American pioneer in the field of hygiene. His advocacy of inoculation and studies in the vital statistics of smallpox attest his discerning interest in preventive medicine. To ophthalmology he made the important contribution of bifocal lenses. His contributions to the diagnosis of lead poisoning are classical. His able unmasking of mesmerism makes psychiatry his debtor.

Franklin approached medicine as he did every other aspect of life—with a searching curiosity which was as probing as it was non-specific. This generality of interest is well shown by the endless variety and casualness of his observations. His contributions were presented with a disarming naturalness, as if what he explained were too obvious not to be already known. Hardly a field of medical knowledge (or indeed of any knowledge) escaped the useful interest of this man's insatiable curiosity. His medical ideas diluted by a thousand other interests and presented without pomp or attempt at effect lie buried beneath his greatness as a philosopher and statesman.

On Drinking

Probably Franklin's earliest published observations on medical subjects are the following lines on drinking written at the age of 16 and published in the New England Courant under the pseudonym of Silence Dogood,

"I doubt not but moderate drinking has been improved for the Diffusion of Knowledge among the ingenious Part of Mankind, who want the Talent of a ready Utterance, in order to discover the Conception of their Minds in an entertaining and intelligible Manner. 'Tis true, drinking does not improve the faculties, but it enables us to use them,

and therefore, I conclude, that much Study and Experience, and a little Liquor are of absolute necessity for some tempers, in order to make them accomplished Orators."²

On Diet

About this time he became a vegetarian under the influence of a book on the subject by "one Tyron." He learned how to cook his own food in order to carry on this fad. But he left off in a most laughable manner which he himself can best describe:

" . . . in my first voyage from Boston, being becalm'd off Block Island, our people set about catching cod, and hauled up a good many. Hitherto I had stuck to my resolution of not eating animal food, and on this occasion I consider'd with my master Tyron, the taking every fish as a kind of unprovoked murder, since none of them had or ever could do us any injury that might justify the slaughter. All this seemed very reasonable. But I had formerly been a great lover of fish, and, when this came hot out of the frying-pan, it smelt admirably well. I balanced sometime between principle and inclination, till I recollected that, when the fish were opened, I saw smaller fish taken out of their stomachs; then thought I, 'If you eat one another, I don't see why we mayn't eat you.' So I din'd upon cod very heartily, and continued to eat with other people, returning only now and then occasionally to a vegetable diet. So convenient a thing it is to be a reasonable creature, since it enables one to find or make a reason for every thing one has a mind to do."³

Franklin's original contributions to the subject of diet were not great. He stood with the Greeks—for moderation, but, as he said many years later, "Philosophers are sages in their maxims but fools in their conduct."^{4*}

Medical science is more indebted to Franklin for his studies of fresh air, bathing and ventilation.

In a time when little was known of what we call hygiene and less was practiced, Franklin was a champion of moderation in

eating and drinking, of fresh air for the well and ill, of daily exercising, of frequent bathing.

On Fresh Air and Ventilation

His interest in fresh air early led him into an investigation of the heating and ventilation of houses. It seems that until Franklin's time smoky chimneys were the rule. Shakespeare mentions a smoky house along with a tired horse and a railing wife as among the tedious things of life. One of Franklin's queries for the Junto (that eighteenth century Rotary Club which he founded and kept alive for thirty years) was, "How may a smoky chimney be best cured?"

His investigations culminated in 1742 with the publication of an essay, "New-Invented Pennsylvania Fire Places," in which Franklin describes the construction and advantages of a new type of cast iron heating apparatus which we would now look on as a cross between a fireplace and a modern room stove. The front of it was open, thus preserving the psychological value of the open fire, but the hot gases instead of going directly to the flue entered a simple labyrinth behind the grate, and thus gave up their heat to the room before reaching the chimney. Franklin's stove carried off the smoke, decreased drafts in the room and permitted the heating of the whole room, which was a novelty at that time in America. The "Franklin Burner" is still a reality in some American homes, and modern builders are rediscovering a Franklin principle in the construction of living room fireplaces. Many are now being built with an air space at the sides and behind the grate space where air is heated and circulated in the room.

Later in a letter to Dr. Jan Ingenhousz, physician to Maria Theresa, Franklin wrote

*Readers will be interested in Franklin's early habit of training himself to write prose by re-writing articles of Steele and Addison from *The Spectator*. Samuel Johnson, who published *Rasselas* in '17, expressed the same thought in more trenchant terms. Writing of philosophers, he comments, "They speak like philosophers but they live like men." Franklin's comment appears to be a paraphrase of the *Rasselas* sentence, as it resembles the type of paraphrasing he did in his early years.

a dissertation on, "The Causes and Cures of Smoky Chimneys," in which he discusses at length the subject of ventilation, dampness, fresh air, colds, etc. " . . . some are as much afraid of fresh air as persons in the Hydrophobia are of fresh water. I myself had formerly this prejudice, this Aerophobia, as I now account it; and dreading the supposed dangerous Effects of cool Air, I considered it as an Enemy, and closed with extreme care every Crevice in the Rooms I inhabited.

"Experience has convinced me of my Error. I now look upon fresh Air as a friend; I even sleep with an open Window. I am persuaded, that no common Air from without is so unwholesome, as the Air within a close Room, that has been often breath'd and not changed. Moist Air, too which formerly I thought pernicious, gives me no Apprehensions; for considering that no Dampness of Air apply'd to the Outside of my Skin can equal to what is apply'd to and touches it within, my whole Body being full of Moisture, and finding that I can lie two hours in a Bath twice a Week, covered with Water, which certainly is much damper than any Air can be, and this for Years together without catching Cold, or being in any other manner disordered by it, . . . And I imagine it a Cause of the same kind that renders the Air in close Rooms, where the perspirable Matter is breathed over and over again by a number of assembled People, so hurtful to Health. After being in such a Situation, many find themselves affected by that *Febricula*, which the English alone call a Cold, and perhaps from the Name, imagine that they caught the Malady by going out of the Room, when it was in fact by being in it."⁵

Franklin seldom lost a useful opportunity of trying to win others to his theories. John Adams has left us the following account of an incident that occurred in 1776 when circumstances compelled him to bunk with Franklin:

"At Brunswick, but one bed could be procured for Dr. Franklin and me, in a chamber little larger than the bed, without a chimney, and with only one small window. The window

was open, and I who was an invalid and afraid of the air of night, shut it close. 'Oh!' says Franklin, 'don't shut the window, we shall be suffocated.' I answered I was afraid of the evening air. Dr. Franklin replied, 'The air within this chamber will soon be, and indeed is now, worse than that without doors. Come, open the window and come to bed, and I will convince you. I believe you are not acquainted with my theory of colds?' Opening the window, and leaping into bed, I said I had read his letters to Dr. Cooper, in which he had advanced, that nobody ever got cold by going into a cold church or any other cold air, but the theory was so little consistent with my experience, that I thought it a paradox. However, I had so much curiosity to hear his reasons that I would run the risk of a cold. The Dr. then began a harangue upon air and cold, and respiration and perspiration, with which I was so much amused that I soon fell asleep, and left him and his philosophy together, but I believe they were equally sound and insensible within a few minutes after me, for the last words I heard were pronounced as he was more than half asleep. I remember little of the lecture, except that the human body, by respiration and perspiration, destroys a gallon of air in a minute; that two such persons as were now in that chamber, would consume all the air in it in an hour or two; that by breathing over again the matter thrown off by the lungs and the skin, we should imbibe the real cause of colds, not from abroad, but from within."⁶

Adams, who lived to the venerable age of 91 years, always claimed that Dr. Franklin died as a result of his own theory since Franklin finally succumbed (at the age of 84 years) to chest complications. He sat before an open window five days before he died!

On Smallpox

Smallpox in Franklin's day was a serious disease which almost everyone contracted sooner or later. It appears from an ad in Franklin's *Pennsylvania Gazette* that to have had the smallpox was an asset (For Sale),

"A negroe wench about 15 years old, has had the smallpox, talks English, etc. Inquire to the printer hereof."⁷

The practice of inoculation* was introduced into America about 1721 through the interest of Cotton Mather and was first performed by Dr Boylstone at Boston. At that time Franklin was an apprentice printer on the *New England Courant*, edited by his brother James. The *Courant*, at odds with Mather, opposed the "doubtful and dangerous practice" of inoculation, but Franklin seems not to have shared this editorial point of view since he was throughout his life a champion of the practice.

"In 1736," he relates, "I lost one of my sons, a fine boy of four years old, by the smallpox, taken in the common way. I long regretted bitterly, and still regret that I had not given it to him by inoculation. This I mention for the sake of parents who omit that operation on the supposition that they should never forgive themselves if a child died under it, my example showing that the regret may be the same either way, and that, therefore, the safer should be chosen."⁸

Many years later, in 1759, Franklin persuaded Dr. William Heberden of London to write an account of the success of inoculation as a means of protection against smallpox. Franklin wrote a four page preface which, in a day when vital statistics was hardly a science, is a masterpiece of statistical persuasion.

"About 1753 or 54, the smallpox made its appearance in Boston, New England. It had not spread in the town for many years before, so that there were a great number of the inhabitants to have it. At first, endeavors were used to prevent its spreading, by removing the sick, or guarding the houses in which they were; and with the same view Inoculation was forbidden; but when it was found that these endeavors were fruitless, the distemper breaking out in different quarters of the town, and increasing, Inoculation was then permitted.

"Upon this, all that inclined to Inoculation

for themselves or families hurried into it precipitately, fearing the infection might otherwise be taken in the common way; the numbers inoculated in every neighborhood spread the infection likewise more speedily among those who did not chuse Inoculation; so that in a few months the distemper went thro' the town, and was extinct; and the trade of the town suffered only a short interruption, compar'd with what had been usual in former times, the country people during the seasons of that sickness fearing all intercourse with the town.

"As the practice of Inoculation always divided people into parties, some contending warmly for it, and others as strongly against it; the latter asserting that the advantages pretended were imaginary, and that the Surgeons, from views of interest, conceal'd or diminish'd the true number of deaths occasioned by Inoculation, and magnify'd the number of those who died of the smallpox in the common way: It was resolved by the Magistrates of the town, to cause a strict and impartial enquiry to be made by the Constables of each ward, who were to give in their returns upon oath; and that the enquiry might be made more strictly and impartially, some of the partisans for and against the practice were join'd as assistants to the officers, and accompany'd them in their progress through the wards from house to house. Their several returns being received, and summed up together, the number turn'd out as follows:

Had the smallpox in the common way		Of these died	
Whites	Blacks	Whites	Blacks
5059	485	452	62
Received the distemper by inoculation		Of these died	
Whites	Blacks	Whites	Blacks
1974	139	23	7

*Inoculation as a protection against smallpox preceded the discovery of vaccination. In Europe and America the actual smallpox virus was introduced into the bodies of susceptible persons through a scratch in the skin in a manner similar to that used in modern vaccination with cowpox virus. As Franklin points out, the chief communal danger in the practice was that those inoculated developed smallpox, which, though usually milder in its symptoms, was as communicable as though it were acquired naturally.

"It appeared by this account that the deaths of persons inoculated, were more in proportion at this time than had been formerly observed, being something more than one in a hundred. The favourers of Inoculation however would not allow that this was owing to any error in the former accounts, but rather to the Inoculating at this time many unfit subjects, partly through the impatience of people who would not wait the necessary preparation, lest they should take it in the common way; and partly from the opportunity of parents prevailing with the Surgeons against their judgment and advice to inoculate weak children, labouring under other disorders; because the parents could not immediately remove them out of the way of the distemper, and thought they would at least stand a better chance by being inoculated than in taking the infection as they would probably do, in the common way.

"The Surgeons and Physicians were also suddenly oppressed with the great hurry of business, which so hasty and general an Inoculation and spreading of the distemper in the common way must occasion, and probably could not so particularly attend to the circumstances of the patients offered for Inoculation."

In Philadelphia, according to Franklin, mortality from inoculation was only half as great (1 in 200) as in Boston (1 in 100). This he believed due to the longer periods between epidemics in Boston with a consequent greater number of adults to be inoculated. He implies that the disease is more severe in adults than children.

"Notwithstanding the now uncontroverted success of Inoculation it does not seem to make that progress among the common people in America, which at first was expected. Scruples of conscience weigh with many concerning the lawfulness of the practice: And if one parent or near relation is against it, the other does not chuse to inoculate a child without free consent of all parties, lest in case of a disastrous event, perpetual blame should follow.

"These scruples a sensible Clergy may in time remove. The expense of having the operation performed by a Surgeon weighs with others, for that has been pretty high in some parts of America; and when a common tradesman or artificer has a number in his family to have the distemper, it amounts to more money than he can well spare. Many of these, rather than own the true motive for declining Inoculation join with the scrupulous in the cry against it, and influence others.

" . . . I may also add an account I have been favoured with by Dr. Archer, physician to the Smallpox Hospital here, viz.:

Persons

There have been inoculated in this Hospital since its first institution to this day, Dec. 31, 1758	1601
Of which number died	6
Patients who had the Smallpox in the common way in this Hospital, to the same day	3856
Of which number have died	1002

"By this account it appears, that in the way of inoculation there has died but one patient in 267, whereas in the common way there has died more than one in four. The mortality indeed in the latter case appears to have been greater than usual, (one in seven, when the distemper is not very favourable, being reckoned the common loss in towns by the smallpox, all ages and ranks taken together) but these patients were mostly adults, and were received, it is said, into the Hospital after great irregularities had been committed. By the Boston account it appears, that, White and Blacks taken together, but about one in eleven died in the common way, and the distemper then was therefore reckoned uncommonly favourable. I have also obtained from the Foundling Hospital (where all the children admitted, that had not had the smallpox, are inoculated at the age five years) an account to this time of the success of that practice there, which stand thus, viz.:

Inoculated, boys 162, girls 176, in all	338
Of these died in Inoculation, only	2

And the death of one of these two was occasioned by a worm fever.

"On the whole, if the chance was only as two to one in favour of the practice among children, would it not be sufficient to induce a tender parent to lay hold of the advantages?

"But when it is so much greater, as it appears to be by these accounts (in some even as thirty to one) surely parents will no longer refuse to accept and thankfully use a discovery God in his mercy has been pleased to bless mankind with: whereby some check may now be put to the ravages that cruel disease has been accustomed to make, and the human species be again suffered to increase as it did before smallpox made its appearance. This increase has indeed been more obstructed by that distemper than is usually imagin'd: For the loss of one in ten thereby is not merely the loss of so many persons, but the accumulated loss of all the children and children's children the deceased might have had, multiplied by successive generations."⁹

On Founding America's First Hospital and Medical School

Franklin helped found not only the first hospital, but also the first medical school in America. His account of the founding of the Pennsylvania Hospital, told in his autobiography, demonstrates that practical ingenuity which runs like a stout cord through the fabric of his life. The successful method of raising funds for America's first hospital devised by Franklin has been copied by many hospitals and other health and welfare agencies in the succeeding generations down to this day.

Franklin not only lent the weight of his influence to the project initiated by Doctor Thomas Bond in 1751 of "establishing a hospital in Philadelphia . . . for the reception and cure of poor sick persons, whether inhabitants of the province or strangers," but stimulated subscriptions by a newspaper campaign. Later he introduced the system of "matching" funds secured by subscription with

an appropriation from the Pennsylvania Assembly. Any health officer out to raise funds or influence people could scarcely pattern his campaign after a more up-to-date model. Here is his own account of the campaign:

"I inquired into the nature and probable utility of his (Dr. Bond's) scheme, and receiving from him a very satisfactory explanation, I not only subscribed to it myself, but engaged heartily in the design of procuring subscriptions from others. Previously, however, to the solicitation, I endeavored to prepare the minds of the people by writing on the subject in the newspapers, which was my usual custom in such cases, but which he had omitted.

"The subscriptions afterwards were more free and generous; but beginning to flag, I saw they would be insufficient without some assistance from the Assembly, and therefore proposed to petition for it, which was done. The country members did not at first relish the project; they objected that it could only be serviceable in the city, and therefore the citizens themselves should be at the expense of it; and they doubted whether the citizens themselves approved of it. My allegation on the contrary, that it met with such approbation as to leave no doubt of our being able to raise two thousand pounds by voluntary donations, they considered as a most extravagant supposition, and utterly impossible.

"On this I formed my plan; and, asking leave to bring a bill for incorporating the contributors according to the prayer of their petition and granting them a blank sum of money, which leave was obtained chiefly on the consideration that the House could throw the bill out if they did not like it, I drew it so as to make the important clause a conditional one, viz.: And be it enacted, by the authority aforesaid, that when the said contributors shall have met and chosen their managers and treasurers, and shall have raised by their contributions a capital stock ofvalue (the yearly interest of which is to be applied to the accommodating of the sick poor in the said hospital, free of charge

for diet, attendance, advice and medicine), and shall make the same appear to the satisfaction of the speaker of the Assembly for the time being, that then it shall and may be lawful for the said speaker, and he is hereby required, to sign an order on the provincial treasurer for the payment of two thousand pounds, in two yearly payments, to the treasurer of the said hospital, to be applied to the founding, building, and finishing of the same.

"This condition carried the bill through; for the members, who had opposed the grant, now conceived they might have the credit of being charitable without the expense, agreed to its passage, and then, in soliciting the subscriptions among the people, we urged the conditional promise of the law as an additional motive to give, since every man's donation would be doubled; thus the clause worked both ways. The subscriptions accordingly soon exceeded the requisite sum, and we claimed and received the public gift, which enabled us to carry the design into execution. A convenient and handsome building was soon erected; the institution has by constant experience been found useful, and flourishes to this day; and I do not remember any of my political manoeuvres, the success of which gave me at the time more pleasure, or wherein, after thinking of it, I more easily excused myself for having made use of cunning."¹

The medical department of the College of Philadelphia, which had been founded by Franklin, was organized through the labors of Doctors John Morgan and William Shippen in 1766 when systematic lectures were begun in this, the first medical school in the United States.

Lead Poisoning

Franklin was not the first to suspect lead as the cause of "Dry Bellyach, with loss of the use of the limbs," but his classical letter to Benjamin Vaughan in 1786 summarizes evidence and makes out the case against lead worthy of a modern textbook. His interest in lead poisoning began with an incident that happened in North Carolina:

"The first Thing I remember of this kind was a general Discourse in Boston, when I was a Boy of A complaint from North Carolina against New England Rum, that it poison'd their People, giving them the Dry Bellyach, with Loss of the Use of their Limbs. The Distilleries being examin'd on the Occasion, it was found that several of them used leaden Still-heads and Worms, and the Physicians were of Opinion, that the Mischief was occasioned by the Use of Lead. The Legislature of the Massachusetts thereupon pass'd an Act, prohibiting under severe Penalties the Use of such Still-heads and Worms thereafter. Inclos'd I send you a Copy of the Acct. taken from my printed Law-book.

"In 1724, being in London, I went to work in the Printing-House of Mr. Palmer, Bartholomew Close, as a Compositor. I there found a Practice, I had never seen before, of drying a Case of Types (which are wet in Distribution) by placing it sloping before the fire. I found this had the Additional Advantage when the Types were not only dry'd but heated, of being comfortable to the Hands working over them in cold weather. I therefore sometimes heated my case when the Types did not want drying. But an old Workman, observing it, advis'd me not to do so, telling me I might lose the use of my Hands by it, as two of our Companions had nearly done, one of whom that us'd to earn his Guinea a Week, could not then make more than ten shillings, and the other, who had the Dangles but seven and six-pence. This, with a kind of obscure Pain, that I had sometimes felt, as it were in the Bones of my Hand when working over the Types made very hot, induced me to omit the practice. But talking afterwards with Mr. James, a Letter-founder in the same Close, and asking him if his People, who work'd over the little Furnaces of melted Metal, were not subject to that Disorder; he made light of any danger from the effluvia, but ascribed it to the Particles of the Metal swallow'd with their Food by slovenly Workmen, who went to their Meals after handling

the Metal, without well washing their Fingers, so that some of the Metalline Particles were taken off by their Bread and eaten with it. This appeared to have some Reason in it. But the Pain I had experienc'd made me still afraid of those Effluvia.

"Being in Derbeshire at some of the Furnaces for Smelting of Lead Ore, I was told, that the Smoke of those Furnaces was pernicious to the neighboring Grass and other Vegetables; but I do not recollect to have heard anything of the Effect of such Vegetables eaten by Animals. It may be well to make the Enquiry.

"In America I have often observ'd that on the Roofs of our shingled Houses, where Moss is apt to grow in northern Exposures, If there be any thing on the Roof painted with white Lead, such as Balusters, or Frames of dormant Windows, &c, there is constantly a Streak on the Shingles from such Paint down to the Eaves, on which no Moss will grow, but the wood remains, constantly clean and free from it. We seldom drink Rain Water that falls on our Houses; and if we did, perhaps the small quantity of lead descending from such Paint might, not be sufficient to produce any sensible ill Effect on our Bodies. But I have been told of a Case in Europe, I forgot the Place, where a whole Family was afflicted with what we call Dry Bellyach, or Colica Pictonum, by drinking Rain Water. It was at a Country-Seat, which, being situated too high to have the Advantage of a well, was supply'd with Water from a Tank, which received the Water from the leaded Roofs. This had been drunk several Years without Mischief; but some young Trees planted near the House growing up above the Roof, and shedding their Leaves upon it, it was suppos'd that an Acid in those Leaves had corroded the Lead they cover'd and furnish'd the Water of that with its baneful Particles and Qualities.

"When I was in Paris with Sir John Pringle in 1767, he visited La Charite, a Hospital particularly famous for the Cure of that Malady, and brought from thence a

Pamphlet containing a List of the Names of Persons, specifying their Professions or Trades, who had been cured there. I had the Curiosity to examine that List, and found that all the Patients were of Trades, that, some way or other, use or work in Lead, such as Plumbers, Glaziers, Painters, &c., excepting only two kinds, Stonecutters and Soldiers. These I could not reconcile to my Notion, that Lead was the cause of that Disorder. But on my mentioning this Difficulty to a Physician of that Hospital, he inform'd me that the Stonecutters are continually using melted Lead to fix the Ends of Iron Balustrades in Stone; and that the Soldiers had been employ'd by Painters, as Labourers, in Grinding of Colours.

"You will see, that the Opinion of this mischievous Effect from Lead is at least above Sixty Years old; and you will observe with Concern how long a useful Truth may be known and exist, before it is generally receiv'd and practic'd on."¹⁰

Throughout his long life Franklin remained humble in his approach to knowledge. When pressed by a friend to appraise the use of electricity in the treatment of palsies, he declared the improvements to be only temporary and suspected that much of the good arose from the patient's daily journey to his house, or "from the spirits given by the hope of success enabling them to exert more strength in moving their limbs . . ."

In his estimate of Negro intelligence Franklin antedated modern psychology by almost 200 years. Writing to the Marquis de Condorcet he noted that free negroes in Pennsylvania were generally "improvident and poor. I think they are not deficient in natural understanding, but they have not the advantage of education. They make good musicians."

On Self Treatment and Quackery

Even though he was probably more learned in the medical arts than many of the physicians of his time (and was so considered by some of the most distinguished among them) Franklin never considered himself a physi-

cian. The Earl of Buchan believed he owed his life to advice Franklin gave, when, in consultation with a physician, he advised against blisters for the Earl who was ill with a fever.

Earlier, in a letter to his mother and father, Franklin apologized for meddling in medical matters.

"Honored Father and Mother:

"I apprehend I am too busy in prescribing and meddling in the doctor's sphere, when any of you complain of ails in your letters. But as I always employ a physician myself, when any disorder arises in my family, and submit implicitly to his orders in everything, so I hope you consider my advice, when I give any, only as a mark of my good will, and put no more of it in practice than happens to agree with what your doctor directs."¹¹

Of quacks he said, they "were the greatest liars in the world, except their patients." Sir John Pringle once told him, Franklin said, that "ninety-two fevers out of every hundred cured themselves, four were cured by art, and four proved fatal."

On Exposing Mesmerism

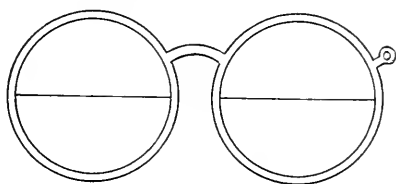
Franklin's most memorable medical exploit was his exposure of Mesmerism, a quackery whose financial success is rivaled only by such up-to-date nostrums as faith healing and patent medicines. Mesmer came to Paris after he was forced to leave Vienna for practicing his fraudulent animal magnetism. Among the gay and idle French nobility of Paris "the laying on of hands" became a rage. Finally, the King appointed Dr. Franklin and four celebrated physicians from the Faculty of Paris to investigate and report on the practice of animal magnetism. Franklin appears to have been the guiding spirit of the investigation and to have written the final reports. Using the experimental method, the commission subjected selected patients suffering from a variety of maladies to the action of the supposed animal magnetic fluid. The results were negative.

In a private report Franklin called attention especially to the dangers of home treatments where women were treated by long-continued pressure of hands of the operator (always a young man) on the lower abdomen.

On Bifocal Lenses

Were all the rest of Franklin's medical contributions to be forgotten, millions of mature men and women would still be debtors to his memory for one of his most useful and casual discoveries—bifocal lenses. Here as in everything else he approached the frontiers of knowledge as a practical housewife would approach the pantry. The approach was in response to a need. The expectation was to find something useful. He needed bifocal lenses. Let him tell you why.

"I imagine it will be found pretty generally true, that the same Convexity of Glass through which a Man sees clearest and best at the Distance proper for Reading, is not the best for greater Distances. I therefore had formerly two Pair of Spectacles, which I shifted occasionally, as in travelling I sometimes read, and often wanted to regard the Prospects. Finding this Change troublesome, and not always sufficiently ready, I had the Glasses Cut, and half of each kind associated in the same Circle, thus



By this means, as I wear my spectacles constantly, I have only to move my Eyes up or down, as I want to see distinctly far or near, the proper Glasses being always ready. This I find more particularly convenient since my being in France, the Glasses that Serve me best at Tables to see what I eat, not being the best to see the Faces of those on the other Side of the Table who speak to me; and when one's Ears are not well accustomed to the Sounds of a language, a

Sight of the Movements in the Features of him that speaks helps to explain, so that I understand French better by the help of my Spectacles . . . "12

On Immortality

Franklin died quietly at the age of 84 years. More than half a century before he had written his famous epitaph:

The Body of
B. Franklin Printer,
(Like the Cover of an Old Book
Its Contents torn out
And stript of its Lettering & Gilding)
Lies here, Food for Worms.
But the Work shall not be lost;
For it will, (as he believ'd) appear once more,
In a new and more elegant Edition
Revised and corrected,
By the Author.

In a letter to the French physician, Dubourg, Franklin made a wish. He had observed that flies bottled in wine could be revived in the sun. "I wish it were possible, from this instance, to invent a method of embalming drowned persons, in such a manner that they may be recalled to life at any period, however distant; for having a very ardent desire to see and observe the state of America a hundred years hence, I should prefer to any ordinary death, the being immersed in a cask of Madeira wine, with a few friends, till that time, to be then recalled to life by the solar warmth of my dear country! But since in all probability we live in an age too early and too near the infancy of science, to hope to see an art brought in our time to its perfection, I must for the present content myself with the treat, which you are so kind as to promise me, of the resurrection of a fowl or a turkey cock."¹³

Franklin was not laid to rest with a few friends in a barrel of Madeira wine, but had his wish been granted we can be sure the chess playing would have proceeded in eternally new combinations, the wine would have circulated slowly to renew the fluid atmosphere without nipping "the backs and heels

of those who sit before the fire," the flow of words would frequently have been interrupted by deep inhalations, and the riddles of the universe would have received the careful consideration they deserve.

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Tuberculosis has risen in the war countries. In England and Wales the increase in deaths from tuberculosis amounted to 5 per cent in the first year of the war and 11 per cent in the second year. In Paris the mortality due to respiratory tuberculosis in the first six months of 1941 increased by 20 per cent and deaths due to other forms of the disease by 30 per cent, in comparison with the first six months of 1939.

One out of every four deaths occurring among girls and young women between the ages of 15 and 30 is caused by tuberculosis.

Tuberculosis always increases during war-time. It is already on the up-grade in large industrial cities in this country.

Each year tuberculosis claims the lives of more than 30,000 young persons between the ages of 15 and 45.



The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

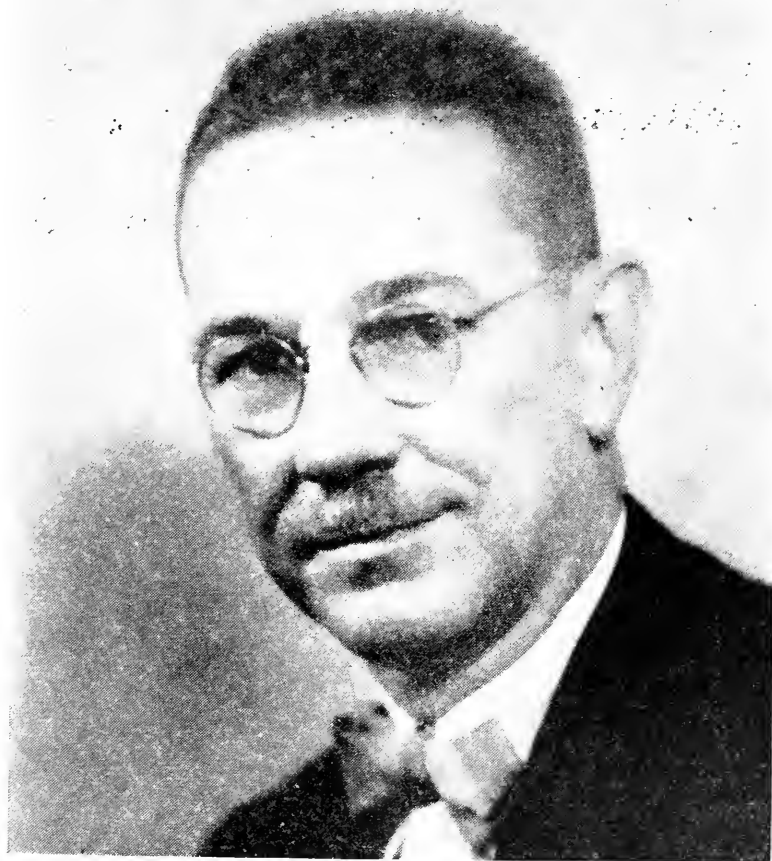
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JOHN ARMSTEAD WINSTEAD, M. D.
1889-1942

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The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils
Appendicitis
Cancer
Constipation
Chickenpox
Diabetes
Diphtheria
Don't Spit Placards
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Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.
Prenatal Letters (series of nine monthly letters).
The Expectant Mother.
Breast Feeding.
Infant Care. The Prevention of Infantile Diarrhea.
Table of Heights and Weights.

Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Instruction for North Carolina Midwives.

CONTENTS

	Page
John Armistead Winstead, M. D.	3
Notes and Comment	4
The American Geriatrics Society	5
The North Carolina Academy of Public Health	7
A Citadel of Health	9
North Carolina School of Public Health	13

John Armstead Winstead, M. D.

By T. F. VESTAL, M. D.

Raleigh, N. C.

A NATIVE of Nash County, born in Nashville, North Carolina, on August 18, 1889. Died in Raleigh, North Carolina, December 25, 1942. Aged 53 years. Doctor "John" was educated in the schools of Nash County and at the University of North Carolina. He graduated in Medicine from the North Carolina Medical College in the class of 1914, licensed to practice Medicine in North Carolina in 1914 and joined the North Carolina Medical Society in 1916. During his early medical practice, he was associated with his uncle, Dr. Poovey, in Lancaster, South Carolina. In World War I, he served overseas with distinction in one of the medical units that saw front line duty.

Returning from overseas, he resumed his medical practice in Rocky Mount where he was affiliated with Park View Hospital. Later he did post graduate work in Pediatrics at the University of Maryland School of Medicine, where he worked in Dr. Sumner's Pediatric Clinic. He was certified by the American Board of Pediatrics, and was a member of the American Academy of Pediatrics. This field of medicine for many years occupied the center of his horizon, and even to the end, he maintained a lively interest in the field. Since October 16, 1940, he had been on the staff of the North Carolina State Board of Health, where he served as Senior Examining Physician with the Division of

Industrial Hygiene. Here he added many friends, especially among the miners of Western North Carolina, who soon learned to recognize him as a true friend, interested in their working environment and its improvement.

Early in life he was married to Miss Daisy Thompson, who with two daughters and three grand-children, survive him. His life has been one of action, and remained so even to within a few days of the end. Sincerity characterized his every effort. All that he did was done the best that he could do it. His life is perhaps best summarized in the immortal words of Robert Louis Stevenson:

"There are men and classes of men that stand above the common herd; the soldier, the sailor, and the shepherd not infrequently; the artist rarely; rarer still the clergyman; the physician almost as a rule. He is the flower (such as it is) of our civilization; and when the stage of man is done with, and only to be marveled at in history, he will be thought to have shared as little as any in the defects of the period, and most notably exhibited the virtues of the race. Generosity he has, such as is possible to those who practice an art, never to those who drive a trade; discretion tested by a hundred secrets; tact, tried in a thousand embarrassments; and what are more important, Herculean cheerfulness and courage."

Notes and Comment

By THE ACTING EDITOR

DOCTOR WINSTEAD

As a staff member of the State Board of Health who was most familiar with Doctor Winstead, Dr. Vestal has given us a brief statement of the man who many of us admired and respected. Doctor Winstead was a modest unassuming gentleman, yet genuinely earnest and a conscientious worker. He exemplified high standards of a profession dedicated to others. There is no question but what North Carolina is a better State by reason of his having lived in it and served in it.

★ ★ ★

MOUTH HEALTH

On page 15 you will find a cut of the front cover of "Mouth Health Catechism," a new publication of the Division of Oral Hygiene. This booklet contains a great deal of worthwhile information which is arranged in an attractive question and answer form. It is available only to those who make written requests for it.

★ ★ ★

DOCTOR JOHNSON

The medical profession of North Carolina has bestowed both honors and responsibilities upon Doctor Wingate Johnson by naming him as president of the Medical Society of the State of North Carolina and as its representative in the councils of the American Medical Association. The Bowman Gray Medical School of Wake Forest College selected him as clinical professor of medicine. The American Geriatrics Society, now only a few months old, selected him as its vice president. He can, therefore, speak with authority concerning the problems dealing with the medical care of the aged. The poem which he quoted concerning "Old Man Halsey," better known to most of us as "Admiral Halsey," calls to mind a distinguished list of old men in military life and civilian

life who are rendering or have rendered distinguished service.

As one 80 year old man to another, our own Josephus Daniels saluted Connie Mack in the Raleigh News & Observer on December 23rd last:

"Upon reaching his 80th birthday, Connie Mack said, 'I am in 100 per cent shape and liable to go on until I'm a hundred.' Reason: he has been frugal, temperate, athletic with a saving sense of humor. Human life has been lengthened by medical knowledge and the use of commonsense."

But why does Connie give 100 as the limitation? Why should he not look toward a riper old age as did an eminent Cardinal, who when an admirer on his 90th birthday said, "Your eminence, I hope you will live to be a hundred," replied, "Why set limits to the goodness of the Almighty?"



Rita Jean Elliott, 11 months old, weight 30 pounds, daughter of Mr. and Mrs. Frank Elliott, Route 3, Rutherfordton, N. C.

The Health Bulletin, Infant Care and Baby's Daily Time Cards were helpful.

The American Geriatrics Society

By WINGATE M. JOHNSON, M. D.

Winston-Salem, N. C.

THE youngest national medical society in the country has for its aim the care of the oldest members of our population. This society is the American Geriatrics Society, organized at Atlantic City last June during the annual meeting of the American Medical Association. Its purpose, as set forth in Article II of its Constitution, "is the encouragement and promotion of study of Geriatrics. Study shall include: Preventive and curative treatment of diseases of advancing years." The only qualifications for membership, aside from interest in the subject, are graduation from a recognized medical school and membership in a state medical society.

The casual reader may smile when he learns of this new society, and wonder why a number of medical men should be interested in the problems of older people. The reader should recall that more and more is being written and said about the increasing average age of our population. Any superintendent of schools can testify that the number of children in the lower grades is becoming less year by year; while every social service worker knows that the relative number of older people is steadily increasing. In 1930 there were in each 100,000 population 24,052 children under 10 years of age, and 10,385 people past their sixtieth birthday; in 1940 there were 21,324 in the younger group, 13,670 in the older. This relative increase of the old may be expected to continue, so that the problem of keeping elderly people in as good physical condition as possible is of increasing importance.

The war has brought many older people back into a sphere of usefulness, both on the home front and in active service. Although many commentators insist that this is a young man's war, the following recent contribution to the *Baltimore Sun* indicates

that the older generation is not entirely out of it:

SAD SONG

This is a young man's war.—Countless radio orators and editorial writers.

HALEY, WILLIAM FREDERICK, naval officer, b. Oct. 30, 1882.—Who's Who in America.

Old Man Halsey,
That poor old man,
Superannuated
Ere the war began.

All he could sink was
Twenty-three Japs,
Plus a few he busted
That went down, perhaps.

Maybe he was crippled
With the rheumatiz—
Maybe he is feeble
At the age he is.

Yet perhaps he didn't
Sink twenty-four
Simply on account of
There weren't no more.

Weep a tear for Halsey!
He cannot fight Japan
With nothing left to shoot at—
The poor old man!

SYMPATHIZER.

The word "geriatrics," meaning the study of old age and its diseases, is, like so many medical terms, of Greek origin. It combines two Greek words, "geras," meaning "old age," and "iatrikos," meaning "healing." The term was coined by Dr. I. L. Nascher, who wrote the first textbook on old age and its diseases in 1909. A second edition was published in 1916. Soon after this, Dr. Nascher—

who deserves credit for originating the conception of geriatrics as a major interest for a doctor—entered public health work in New York. When he did so, he bequeathed his mantle to Dr. Malford W. Thewlis, of Wakefield, Rhode Island. Dr. Thewlis has carried on nobly; his book, "The Care of the Aged," has proved so popular that the fourth edition was published last summer within a year of the third revision. To Dr. Thewlis is due the credit for planning and executing the organization of this new society.

Victor Hugo has said that forty is the old age of youth; fifty the youth of old age. Everyone within this decade should begin to visit his doctor more frequently and to take his advice more seriously. A doctor who is particularly interested in the problem of old age should be more capable of advising his patients not only how to live as long as possible, but how to get the most out of life; just as a doctor who has made a special study of the problems of childhood is more capable of counseling his patients and their parents. Pediatrics has been described as general practice among children; geriatrics might be equally well defined as general practice among the older age group.

Geriatrics is not likely to become a medical specialty analogous to pediatrics, however. The child, it is said, "has no objection to being a child and knows that he will soon get over it, whereas the oldster has been dreading old age all his life and knows that it will not only continue but get worse." For this reason it is hardly to be expected that many—if any—physicians will be content to devote their whole time to patients past 60 or 65. For a doctor to label himself as treating only the aged would tend to keep many of them away from his office. To make an exclusive specialty of geriatrics would inevitably defeat the purpose that Dr. Thewlis and those who were associated with him had in mind in joining hands, hearts, and minds in helping to make the last years of life more tolerable, more useful, and happier. The most important aim of Dr. Thewlis and others interested

in the aged is the anticipation and prevention—so far as possible—of the diseases which will most probably affect the elderly person. In order to accomplish this, it is necessary to know the individual as a patient long before he has reached the three score and ten mark.

The importance of this aim of geriatrics—preparing the middle aged man for old age—is indicated in the preface to another book by Dr. Thewlis, called PRECLINICAL MEDICINE. In this he states: "The aim of pre-clinical medicine is to prevent suffering . . . The general practitioner is aided in this work by his familiarity with the life history and actual condition of his patient.

"The thesis of this book is as follows: that patients should be diagnosed and treated at the time when the soil for actual disease is being conditioned. On detecting a disease soil, one should, if possible, suggest what seems most likely to prevent the soil from reaching the conditioning period." Certainly, in order to achieve this purpose, it would be necessary for a doctor to know and advise his patient long before senility set in. An example of "disease soil" familiar to everyone is the tendency of the robust athlete to overeat after his athletic days are over, thus becoming obese and inviting diabetes, arthritis, and a host of other diseases. The slender, wiry, high strung salesman, on the other hand, is a candidate for peptic ulcer and psychoneuroses.

For many years the trend in medicine has been to emphasize prevention rather than cure of disease. The organization of the American Geriatrics Society is in line with this trend. It is to be hoped that more and more doctors will become interested in the problems of old age, particularly in the anticipation of the preventable diseases of this period, and will become familiar with the adjustments that must be made. The old man or woman does not need and usually does not want sentimental pity, but a practical understanding sympathy that begets the

right sort of advice—advice that enables the individual to conserve his physical strength, while continuing to exercise his mental faculties as fully as possible.

Reference

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The North Carolina Academy of Public Health

By WILLIAM H. RICHARDSON

North Carolina State Board of Health
Raleigh, N. C.

TWO hundred employees of the State Board of Health, including directors, consultants and others, met in the auditorium of the State Laboratory of Hygiene this week, and launched the North Carolina Academy of Public Health, which, so far as is known, is the first organization of its kind in the United States.

The objects of this new organization are:

1. The cultivation of the science of public health.
2. The advancement of the character and honor of the public health profession.
3. The elevation of the standard of education of all public health workers.
4. The promotion of public health and the extension of its benefits to ALL people.

This newly-created organization elected the following as its first group of officers: Dr. George M. Cooper, Assistant State Health Officer, President; Dr. Ernest A. Branch, Director of the Division of Oral Hygiene, vice-president, and Mrs. Annie B. Edwards, the efficient secretary to your State Health Officer and well-known in the circle of professional and business women, secretary and treasurer.

Thus we have presented to you the external picture of an organization, the prime object of which will be to promote **your** interests as they are affected by public health in North Carolina.

The mechanics of this new organization will differ little, if any, from those employed

by other groups banded together for the attainment of various objectives, which in this case do not include self-aggrandizement. Salary scales will not be considered as an order of business at any time. These are fixed by the budget, and changes are all based on certain fixed principles, which are recognized by public health employees. The same is true of working hours, which are the same as those observed by other departments of state government. There has not been and there probably never will be any request for extra pay for overtime work. If it is impossible for a public health worker to perform a day's task within certain prescribed hours, he or she stays on the job until the "all clear" is sounded, with but one object in view—service. While public health office workers remain at their desks from 9 in the morning until 5 in the afternoon and until 1 o'clock on Saturdays, those in the field often find it impractical to fix a ceiling for quitting time. They often work after the evening meal and then travel to the next point, in order to be ready for duty the following morning.

Neither will the North Carolina Academy of Public Health concern itself with political activities. As a matter of fact, public health workers are strictly forbidden to do this, both under the law and by choice. They are dedicated to nobler purposes.

What, then, are the objectives of this new organization? Well, they were broadly stated at the outset. In a nutshell, they constitute

one word—and that word is SERVICE—service to you.

The groundwork for organization was laid by a committee composed of Dr. Cooper, who was later elected president; Dr. John H. Hamilton, director of the State Laboratory of Hygiene, and Dr. J. C. Knox, director of the Division of Epidemiology—and its purposes were explained by Dr. Carl V. Reynolds, your State Health Officer.

Dr. Reynolds pointed out that, according to his knowledge, the North Carolina Academy of Public Health is the first organization of its kind in the United States. This opinion also was voiced by Dr. William A. McIntosh of the Rockefeller Foundation, New York, who was present as a visitor and whose work has taken him into many states, where he has had occasion to visit numerous health departments and to study their activities.

Doctor Reynolds referred to the group before him as specialists, each having been trained to perform the duties assigned to him or her. However, he emphasized the importance of teamwork and asked the members of this new organization to study the public health picture as a whole—to study all the functions of the State Board of Health, in order to acquire a broad understanding of just what it is trying to accomplish in behalf of humanity. Furthermore, he urged free expression on the part of each member at all meetings. "Don't be afraid to speak out, give your views on any subject," he said, "as this will give you and your associates a better understanding of the problems confronting us. Do not hesitate to express differences of opinion," he went on, "for in so doing you will promote constructive criticism, which is always wholesome and often proves an incentive to nobler effort."

Doctor Cooper, in addressing the group, emphasized the importance of health education.

At each meeting of the North Carolina Academy of Public Health, some definite activity will be studied. For example, the initial program included a review of the work that is being done for men in industry

by the Division of Industrial Hygiene, of which Dr. T. F. Vestal is the director. This division is a conjoint activity of the Board of Health and the State Industrial Commission and concerns itself with the welfare of those whose occupations subject them to dust hazards. Mrs. Louise East discussed nursing in industry, pointing out that more and more women are entering fields formerly occupied only by men. This, she added, gives rise to industrial health problems heretofore almost unknown, and she added that women lost much more time from their work on account of illness than is lost by men—in fact, ten times more, which makes it all the more important that women in industry be given the best of care.

Doctor Vestal, in his discussion, informed the health specialists that there are, all told, about 52,000,000 industrial workers in the United States—that upon the efforts of these depend the duration and the outcome of the present global war. The total, he said, includes about three-quarters of a million employed in our own State of North Carolina.

The work of other divisions will be taken up for intensive (and illustrated) study by the North Carolina Academy of Public Health, from time to time. This will be done with a view to affording each worker a knowledge of what others are doing and what the entire public health program means to the people of this State.

With the progress of the war, public health problems have assumed increasing importance, as can readily be seen. It is, therefore, all the more necessary that trained personnel be kept intact; that only trained workers be employed, and that even those with years of experience prepare themselves to keep abreast of the times. Many public health practices that were sound a decade ago now have become outmoded. Public health workers, therefore, must familiarize themselves with new— and emergency—methods, in order that these may be put into practice. Disease, like time and tide, waits for no man—nor must the health worker permit disease to establish a bridgehead. He must, to use an expression now

often heard, prevent it from landing and from getting reinforcements. Just as it takes trained soldiers to fight the Germans, the Japanese and the Italians, so the soldiers of public health must be trained in modern, scientific warfare.

You will note that one of the four main objectives of the North Carolina Academy of Public Health is to elevate the standard of education of all public health workers. These men and women, who are serving you, have never pretended to know it all. The best they can do, just like you in your work, is to proceed according to their best lights—but they *can* keep these lights trimmed and burning, and that is just what they propose to try to do.

The fourth objective is, I think, worthy of note—the promotion of public health and its extension to all people.

Public health knows no class, no race, no

creed. Its benefits are intended to reach all—to throw about all an equal amount of protection. We know full well that disease is no respecter of persons—hence, all must be protected against its ravages. The task of doing this cannot be selfishly performed. Those engaged in it must forget their own interests and dedicate themselves to the noble task that lies before them.

To make the job a complete one. YOU must give *your* sympathetic support—and that is what your State Board of Health asks, not only for itself in the duties it is called upon to perform in your behalf, but for the workers in the eighty-six counties with organized health units, which are serving 93.5 per cent of our population, numbering 3,340,975 men, women and children of North Carolina—white people, Negroes. Indians and the comparatively few aliens who have taken up residence among us.

A Citadel of Health

By ROBERT F. YOUNG, M. D.

Division County Health Work
North Carolina State Board of Health
Raleigh, N. C.

CAN you imagine yourself for a few moments living within a fortress of health, shut in from the many diseases and forces of destruction that exist without? What kind of a world would this be? No tuberculosis. Cancer, a rare condition. Communicable diseases, a prehistoric episode. Mass murder by fools in automobiles, a legendary story of days long ago. Venereal diseases, a rarity. Typhoid fever, a filth disease, remembered by only the oldest in the colony, never heard of by the present generation. Wouldn't you call this a Citadel of Health?

And yet if we would but utilize the facilities and the wonderful life saving discoveries placed at our disposal by medical science today, we would not be far from such a Citadel of Health.

Most of us have children. We love them. Nothing bleeds the heart quite so much as the death of an innocent child. And nothing cheers the heart so much as a bright eyed, rosy cheeked child full of laughter and full of life.

Then what is it that dares to steal the color from our children's cheeks to leave them pale with death? The greatest killer of the communicable diseases among children less than five years of age is **Whooping Cough**. Is it preventable? It cannot be prevented in every instance, but when a baby is properly vaccinated at four or five months of age followed by an activating dose of vaccine later in childhood, the disease will be prevented in most cases, and in every case the disease will be made lighter and the complications will be

avoided. Ninety-five (95) little crosses were placed in the cemeteries throughout our State in 1941 (latest complete statistics available for entire State for 12 month period) for children who died with whooping cough. Seventy-five of these deaths were in children under two years of age and ninety-two deaths were children under five years of age. There were 10,933 cases of this dread disease in North Carolina for 1941. From July, 1940 through June, 1942—214 deaths from whooping cough were reported. Just remember that babies under two years of age, particularly, must be protected against whooping cough.

There is another stealthy enemy of children under five years of age, particularly those under two. This disease usually comes on in the dead of night to choke the child with its lethal membrane. With the patient desperately ill we recognize the disease as an extreme emergency and hurriedly call our physician who, thanks to his skill and the highly efficient anti-toxin available today, is able to save the child's life in many cases; however, there are some patients who do not respond to this heroic treatment and are lost. There were 58 such cases in North Carolina during 1941. (Forty-two of these deaths were under 5 years of age.) You know by now that the disease described above is diphtheria. From July, 1940 through June, 1942—101 deaths from diphtheria were reported. There were 1,629 cases of this enemy of childhood in North Carolina for 1941.

There is a vaccination for diphtheria that, when properly administered, prevents the disease except in a very rare case when even the disease itself doesn't protect against subsequent attacks. This immunization should be given when the baby is 9 months of age; however, if a child is past this age and not immunized against diphtheria, it should still be given the vaccine. If even fifty per cent of the children under five years of age could be immunized against diphtheria in a given community, this disease could be controlled.

We are all familiar with the North Carolina law that every child must be immunized against diphtheria by the time it is 6-12 months

of age and that those children over 12 months of age when the law was enacted must be vaccinated before they enter school. But we do not want parents to have their children vaccinated because the law requires it. This should be done because parents want to see their children live and because they do not want to see their babies suffer with a disease for whose existence there is no earthly excuse today.

All childhood communicable diseases are serious for children under five years of age. The death rates are ten to twenty-five times higher from these diseases in children under five years of age than among children over five years of age. Protect the little babies from these diseases at all costs.

All babies should be vaccinated against smallpox by the time they are three or four months of age and certainly by one year of age. An infant of this age has very little reaction to the immunization, whereas the older a child gets before it is vaccinated the more reaction it will have as a rule.

Many younger physicians have gone through medical school and their hospital work without having seen a single case of smallpox. Why? Because vaccinating most of the general population for many years has whipped this hideous disease to its very knees. This same thing can be done for whooping cough and particularly for diphtheria. It cannot be done, however, by wishful thinking or planning alone, but there must be action and concerted action as well.

Some of us have children in high school, and here is where we begin to meet a disease which is another serious health problem. This disease is Tuberculosis, known not many years ago as the Great White Plague.

There were 1,561 deaths from tuberculosis of the lungs in North Carolina in 1941—Of this number 933 or 59% were among negroes. This dastardly toll gave the disease 8th place in North Carolina among the causes of deaths for this year. There were 1,717 deaths from all forms of tuberculosis in 1941, while from July, 1940 through June, 1942—2,392 deaths of all forms of this disease were reported.

Tuberculosis kills more young people of high school age than any other disease. These students must be tuberculosis minded. They must be taught that the secret to controlling this disease is Early Diagnosis and Early Treatment. Periodic examinations are vitally essential. The X-ray is the most important single means of diagnosis.

Another pair of cripplers as well as killers are syphilis and gonorrhea. Through November, 1942 the Local Health Departments of North Carolina admitted 19,653 patients to the 307 venereal disease clinics throughout the State. Of this astronomical total—13,119 patients had syphilis and 6,534 gonorrhea and other venereal diseases. During this same period 784,791 treatments were administered in a concerted drive to control these diseases. Of this total 751,426 were for syphilis. We must pursue these forces of destruction relentlessly with the fury of a blitzkrieg in order to bring them to justice.

The State and Local Health Departments are cooperating with the Selective Service Boards in the State in rehabilitating the registrants found infected with venereal diseases. These agencies are working hand in hand with the law enforcement agencies in controlling prostitutes.

In 1941, 2,647 babies were born dead in this State. While from July, 1941 through June, 1942—3,611 stillbirths were reported. Syphilis was a great offender here. Furthermore, there were 5,073 babies to die under one year of age. Syphilis took its toll here as well; however, there are other causes of death among infants that are just as important as syphilis, if not more so. In the United States twenty-five thousand babies die each year with syphilis. In North Carolina—7,253 infant deaths were reported from July, 1940 through June, 1942.

In the United States as a whole over one hundred thousand persons die each year from syphilis; forty thousand persons die each year because of syphilitic heart disease; one in ten cases of insanity is due to syphilis; and one in seven cases of blindness is due to this horrible disease.

The control of these diseases can be approached by proven case finding methods, including routine blood tests, and by persistent treatment of the infectious cases.

The great source of venereal diseases in the white race is the prostitute. These fountains of infection must be apprehended and placed under regular, controlled treatment, if we are ever to control syphilis and gonorrhea in the white race.

Many mothers needlessly sacrifice their lives in childbirth, when regular prenatal visits beginning early in pregnancy to a private physician or to one of the 308 maternal and child health clinics throughout the State would reveal the danger signals in time to save their lives. Many of the babies who die during the first year of life could be saved by the mothers bringing these infants to a private physician or to a baby clinic regularly to learn the many safeguards that should be observed in rearing these children, particularly during the delicate early months of their lives. Medical science has made these things available, but unfortunately we are all too slow to accept these life saving measures.—Too slow—until finally death claims a loved one; and then—it is too late. Certainly our mothers deserve the protection our Citadel of Health affords.

There is a condition that is even more important than tuberculosis and venereal diseases when we reach the forty year mark in our lives. This condition is cancer.

In the United States as a whole, cancer takes the lives of one hundred fifty-three thousand patients each year to rank second only to heart diseases as the greatest killer known to man. In North Carolina there were 2,056 deaths from this fifth columnist during 1941.

Here, again, the keynote to controlling this disease is early diagnosis and early treatment. Periodic examinations by our family physicians are absolutely essential for everyone past the age of forty. We should be checked up at least once a year during our entire lifetime, and we are throwing away a golden opportunity for longevity when we utterly ignore

our bodies year after year. This is certainly true with cancer, for remember these words, **Cancer Can Be Cured**. But in order to be cured, this condition must be diagnosed; and in order to be diagnosed, we must present ourselves for examination.

It is so natural for us (during normal times) to take our cars around to the filling station to be greased and to have the oil changed; the battery filled up; and the tires checked. We wouldn't think of driving our car around the block without a drop of oil in the crank case. We would think someone to be mad who drove his car for mile after mile with one to four flat tires (except during the present emergency) when filling stations are on every corner and at every cross roads. But how many of us take ourselves around to the doctor even once a year for a check up? How many of us stop to think that even though we apparently feel fine, we may be running low on resistance to tuberculosis and a host of other maladies. Or, perhaps, we might have a precancerous lesion such as a sharp tooth, a rapidly growing mole, or a focus of infection that maintains constant irritation. These things if found in time can be corrected and cancer thus prevented.

Most all forms of cancer when found early can be cured. To prove this statement the American College of Surgeons has the records of over thirty thousand persons in this country who have been cured of cancer, and there are many others besides these who have been cured of this most dreaded condition.

Another step toward a Citadel of Health is to play safe when driving an automobile. Don't take any chances.

The last report revealed that 827 people had been killed on the highways within our own State through December 29, 1942. This toll of lives taken in the State by automobile accidents is still staggering. There were 1,301 citizens murdered on the highways of North Carolina by automobile drivers during 1941. The toll this year represents a drop of approximately 36%. Isn't it a bit stupid on the part of civilized people that it requires a

bloody world war to make speed crazy individuals slow down their driving and diminish their recklessness enough to affect the above decrease? Prior to the present war—the death rate from automobile accidents had been climbing like a P-38 army plane. Imagine between thirty-five thousand and forty thousand American citizens being murdered each year by this mass slayer. You, as the leaders in your community, should report to the proper authorities any driver of an automobile who openly and foolishly violates a traffic regulation and thereby jeopardizes the lives of your children and fellow citizens. This mass murder can only be stopped by mass action on the part of the people who cherish life and order and who practice safe driving themselves.

Finally, in order for us to live more abundantly and to enjoy our just measure of health, we must consider seriously the problem of nutrition.

Nutrition is vitally important for the progress and welfare of our own community and for the salvation of the country as a whole. Someone has said, "The winning of a war is a race for food." Another has said, "Good food makes sound bodies."

Brigadier General Hershey, addressing the National Nutrition Conference for Defense, said that his observations indicated that at least one third of the men rejected by the Selective Service Boards for physical causes had obvious defects resulting from either under nutrition or wrong nutrition.

The National Nutrition Conference stated that every family should have at least the following food each day for good health:

1. One pint of milk for adults and more for a child.
2. A serving of meat.
3. One egg or some suitable substitute such as navy beans.
4. Two vegetables, one of which should be green or yellow.
5. Two fruits, one of which should be rich in vitamin C, found abundantly in citrus fruits and tomatoes.

6. Breads, flour and cereal, most or preferably all whole wheat or enriched.
7. Some butter or oleomargarine with vitamin A added.
8. Other foods to supply the appetite.
9. For babies throughout the year, and for older children and adults during the winter months, cod liver oil should be added to provide more vitamin D.

What we need in our State is more gardens, particularly year round gardens and more cows. Every family needs a small plot of ground to produce the necessary vegetables. This is particularly true with families that live on farms. It is amazing the number of farm families who do not have year round gardens. This condition must be corrected if we are ever to vanquish malnutrition and under nutrition, particularly during the present emergency.

These things I have mentioned are all within our reach if we would but extend our arms for them. Medical science has laid them

at our door if we would but receive them and build for ourselves a Citadel of Health. Then we would have what Dr. Milton J. Rosenau described when he wrote, "Preventive medicine dreams of a time when there shall be enough for all, and every man shall bear his share of labor in accordance with his ability, and every man shall possess sufficient for the needs of his body and the demands of health. These things he shall have as a matter of justice and not of charity. Preventive medicine dreams of a time when there shall be no unnecessary suffering and no premature deaths; when the welfare of the people shall be our highest concern; when humanity and mercy shall replace greed and selfishness; and it dreams that all these things will be accomplished through the wisdom of man. Preventive medicine dreams of these things, not with the hope that we, individually, may participate in them, but with the joy that we may aid in their coming to those who shall live after us. When young men have visions the dreams of old men come true."

North Carolina School of Public Health

By CARL V. REYNOLDS, M. D.

State Health Officer

Raleigh, N. C.

WHAT was described as a "shoestring" when it began operation in 1937 has grown to be one of the strongest links of our public health chain. Reference here is to the North Carolina School of Public Health, located at Chapel Hill, which has the largest full-time faculty of any similar institution in the United States. On its horizon broader activities are taking shape which will increase this school's usefulness commensurate with the necessities of the period in which we are living.

At present the School of Public Health has eighteen full-time professors, one of whom is on leave and holds a high post overseas; six

associate professors, seven research fellows and assistants, and thirty-three lecturers.

Launched in time of peace, this institution has adapted itself to the demands of war with its complex health problems. It has come to be not only a school of public health, in the strict sense of the term, for the training of doctors, nurses, engineers, sanitarians and school dentists for our continuing program, but includes courses in public health education. It is, therefore, a part of the equipment designed to give our people an ever-increasing sense of health consciousness, not for the duration of the war but in the period to follow, when it will be vitally nec-

essary to hold the gains we shall already have made and to pioneer in new fields yet scarcely touched, in order that we may achieve a healthy as well as a politically and economically safe peace.

Recognizing the value of the North Carolina School of Public Health, the Army has turned to it for training for its health workers, the first contingent of twenty men having recently completed a course which began last fall.

Trainees from many states have gone back to their respective fields of service equipped for the duties confronting them. The courses given are designed not only to emphasize existing needs in the field of public health but to train workers to meet these needs and respond intelligently to new demands.

At this replacement center, three public health educators have just completed a course of intensive training and are now in the field ready to put into practice that which they have learned. Five more will also take training there in public health education, making eight in all. These are replacing health educators loaned to the State by the United States Public Health Service. Thus, this important work will be turned over to the State itself, in charge of a staff familiar with local needs and equipped to meet these needs.

Through public health education, workers will be in a position to tear the mask of invisibility from the intangible and to translate theory into practice.

The School of Public Health, which is the outgrowth of a movement launched in 1935, enjoys the active cooperation of the North Carolina State Board of Health, the directors of which are included among the lecturers. Cooperation also is maintained not only with the University of North Carolina, on the campus of which the school is located, but with Duke University, its hospital, and Watts Hospital in Durham. Students enjoy the rights and privileges of the general student body of our own State University.

Dr. Milton J. Rosenau, the school's first dean, now its director, is one of the world's leading authorities on preventive medicine and

has written a textbook which is universally accepted and taught. Before coming to North Carolina, he was professor of preventive medicine and hygiene at the Harvard Medical School, professor of epidemiology at the Harvard School of Public Health, director of that school, and also associated with the Massachusetts Institute of Technology. Besides, he served as director of the Hygienic Laboratory of the United States Public Health Service.

We invited him to come to North Carolina upon his retirement from Harvard; and, in this connection I might call attention to the fact that his "Preventive Medicine and Hygiene" covers subjects not included in his other works and was written, as he stated it, "in response to a demand for a treatise based upon modern progress and hygiene."

Writing me, after the School of Public Health became a happy reality, Doctor Rosenau said:

"I came here on a shoestring and was plainly told that the University had no money available for the purpose. Federal support came later. The institution intrigued me and I found on the campus the love of adventure for new frontiers of public health."

When Doctor Rosenau's title was changed to that of director, Dr. Harold W. Brown was made dean, which position he now holds. Doctor Brown, a native of Michigan, received his A. B. degree at Kalamazoo College, his M. A. degree from Kansas State College and his degree of Doctor of Science at Johns Hopkins. He graduated in medicine at Vanderbilt in 1933. Later, he attended the London School of Hygiene, where he made a special study of tropical medicine. He graduated in public health at Harvard and came to the North Carolina School of Public Health in 1939, as professor of public health.

The object of the North Carolina School of Public Health is to provide the scientific groundwork which underlies sound public health administration. To this is added acquaintance with modern public health procedures of a selected type. The program includes lectures, sanitary surveys in the field,

various exercises and laboratory work under members of the faculty, supplemented by special instructors actually engaged in meeting public health problems. Students may select the courses in their curriculum to prepare themselves for careers in teaching, administration, field or laboratory positions. Special opportunities are offered those who desire to contribute knowledge through laboratory research or field investigations.

An effort is made to arouse in the mind of the student a feeling that graduate work is not a matter solely of attendance on classes and passing examinations in courses. There is a broader meaning. A student must see his work as a whole and in its relation to a department of learning, not as a set of isolated units. This principle is of especial importance in the training of public health educators to meet and cope with current problems which are connected, directly or indirectly, with our war effort.

This brings me to a brief discussion of another angle of the work that is being done on the University campus at Chapel Hill. The Department of Public Health Nursing is an integral part of the School of Public Health. Its objective is to acquaint its students with modern trends in this specialized branch of nursing and to furnish a broad base upon which to build procedures of a more selective type.

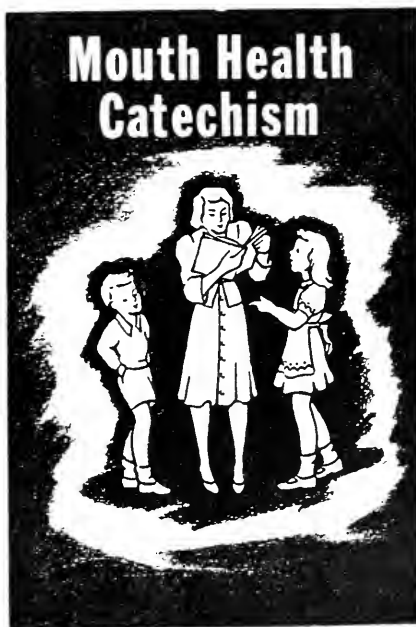
At a recent meeting of State Board of Health employees, held at the State Laboratory of Hygiene in Raleigh, for the purpose of encouraging closer cooperation between all units, one speaker very aptly referred to the Board as being in Raleigh and Chapel Hill. Reference to the latter place was, of course in connection with the School of Public Health and the Department of Public Health Nursing.

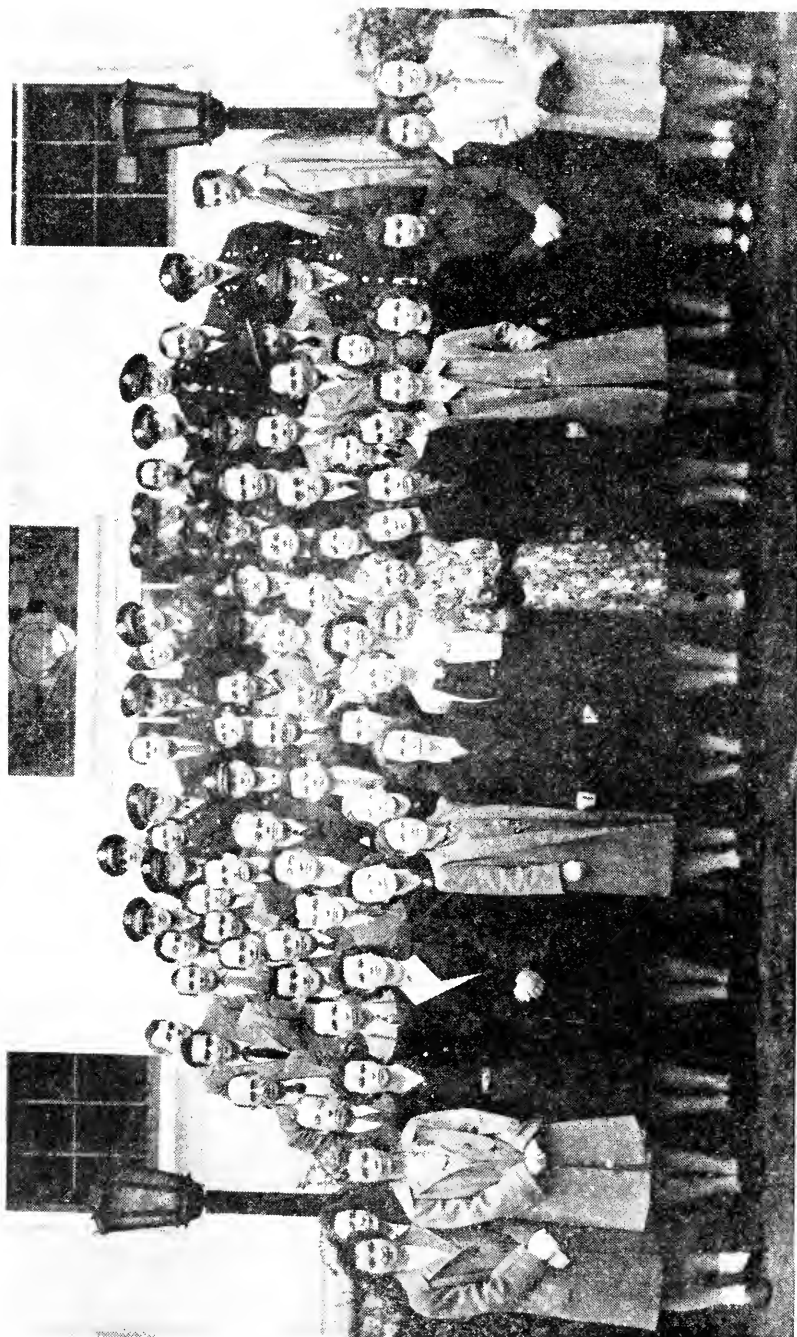
Thus, in this institution we have the facilities to train the evangelists of public health to "preach the gospel to all people."

IT'S FREE FOR THE ASKING

The Division of Oral Hygiene wants every interested mother in the State to have this **MOUTH HEALTH CATECHISM**. Send your request on a postal card to the Division of Oral Hygiene, North Carolina State Board of Health, Raleigh, N. C.

Mouth Health Catechism





U. OF N. C. SCHOOL OF PUBLIC HEALTH — 1942



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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
Diphtheria	Measles	Venereal Diseases
Don't Spit Placards	Pediculosis	Vitamins
Endemic Typhus	Pellagra	Typhoid Placards
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine	5 to 6 months; 7, 8, and 9 months; 10,
monthly letters).	11, and 12 months; 1 year to 19 months;
The Expectant Mother.	19 months to 2 years.
Breast Feeding.	Diet List: 9 to 12 months; 12 to 15 months;
Infant Care. The Prevention of	15 to 24 months; 2 to 3 years; 3 to 6
Infantile Diarrhea.	years.
Table of Heights and Weights.	Instruction for North Carolina Midwives.

CONTENTS

	Page
Notes and Comment	3
Maternity Summer Session	4
And For Mankind—A New Freedom	4
Venereal Disease Control in North Carolina	8
The Venereal Disease Education Institute	10
Important Intestinal Parasites in Western North Carolina	13

Notes and Comment

By THE ACTING EDITOR

DOCTOR REYNOLDS Some day when "Notes and Comment" can spread itself over a number of pages we hope to give an inventory of the accomplishments of Dr. Carl V. Reynolds during his administration as State Health Officer. We assure you that it would take several pages just to list the changes he has wrought.

In the February issue of the Bulletin Dr. Reynolds told of one accomplishment, the University of North Carolina School of Public Health—yet he modestly refrains from mentioning the fact that he played a very large part indeed in founding it. In the few short years during which this school has existed it has exercised a very wholesome and invigorating influence on the public health program of North Carolina and in other Southeastern states. This institution not only trains public health workers—it studies health problems. Its usefulness will increase with the passing of years.

In this issue of The Bulletin we carry the first comment which we have made concerning the newest adventure of Dr. Reynolds in the field of Public Health—The Venereal Disease Educational Institute. For the directing head of this institute Mr. Capus Waynick was chosen. Mr. Waynick is known to most of our readers as Editor of the High Point Enterprise. He has served the public in the capacity of member of the General Assembly, Chairman of the State Highway Commission and Director of the Division of Purchase and Contract. On July 1, 1942 he began to assemble his staff

of writers and artists and to organize his program. The people of the State will watch with keen interest the development of this activity. The success of its efforts can be determined only by time and results.

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MR. FERREE The front cover and all the posters represented in this issue were executed by Mr. T. S. Ferree, Jr., Chief Artist of the Venereal Disease Educational Institute of the North Carolina State Board of Health.

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APPRECIATION Ordinarily we do not publish letters to the Bulletin. The following we believe should be an exception to the rule:

"This will acknowledge receipt of the Health Bulletin for December 1942 for our Workers' Library and Education Committee. With our sons and shopmates in southern army camps we feel a close kinship and co-operation with each issue of the Health Bulletin.

"The objective of our Workers' Library and Education Committee is to stimulate an education for Life, Liberty and Happiness for our members and their families.

O. G. Overcash, Chm. Education
L. U. No. 287 UAWA-CIO
511 N. Dill Street
Muncie, Indiana."

Maternity Summer Session

University of North Carolina
Chapel Hill, North Carolina

PUBLIC Health Nurses are concerned with the preservation of life. While the destruction of life is widespread at present, constructive measures demand sharp attention. The starting point of an adequate public health nursing program is maternity. With the rising birthrate maternity services will increase.

For preparation in maternity, graduate nurses are invited to attend the Summer Session at the University of North Carolina. "The Public Health Nurse in a Maternal Health Program" will be offered to Public Health Nurses during the first Summer Session at the University of North Carolina at Chapel Hill, June 7 to 27, 1943. The Department of

Public Health Nursing, through the School of Public Health, will direct the activities. Miss Louise Zetzsche, Supervisor of Maternal and Infant Welfare, Denver Visiting Nurse Association, Denver, Colorado, will be guest instructor. Four and one-half quarter hours of credit will be awarded upon completion of the course. For further information, write to Miss Margaret Blee, Assistant Professor of Public Health Nursing, Department of Public Health Nursing, School of Public Health, University of North Carolina, Chapel Hill, North Carolina.

1837 Bessie saw the protozoa of pebrine in silkworms.

And For Mankind--A New Freedom

By **CARL V. REYNOLDS, M. D.**
State Health Officer
Raleigh, North Carolina

A BABY is born dead. Another goes through life blind, sickly or with a feeble mind. A son is old before his time, unfit to fight, unable to work. Our generation is plagued by past generations having passed terrible disease to us. People did not know the facts about syphilis. A daughter's life is wrecked, a family ends, because she did not know the facts about gonorrhea. Such is just a bit of the price we pay—millions of times—for not facing the facts about those two diseases.

All of that sounds gloomy. It is gloomy. For heartache, sickness, insanity and death



caused by the venereal diseases are all around us. But, there is good cheer. There can be a new freedom for mankind—freedom from those cripples and killers, syphilis and gonorrhea. Full, healthy lives formerly denied millions of people can now be enjoyed by them. Simply stated, the message is that doctors can cure both syphilis and gonorrhea. It is possible to wipe out both diseases in our time. It would be our great crime against future generations to let the venereal diseases be an established heritage of man.

The unquestionable fact that both of them are preventable and curable brings impatience to a health officer who has known for years the extent of their tragic toll.

The North Carolina State Board of Health has welcomed the opportunity to ally its forces in the fight to control these diseases

with those of the United States Public Health Service. After advocating such a program for more than a quarter of a century, it is gratifying to see the North Carolina sector now so well armed for the fight. Much credit for that must go to the Zachary Smith Reynolds Foundation not alone for its great financial contribution, but also for the trustees' personal enthusiasm and support of the cause.

Essential strategy in the fight is to intensify our education endeavors. From the recognition of this necessity arose the idea for founding the Venereal Disease Education Institute under the sponsorship of the Reynolds Foundation and the United States Public Health Service.

To the end that all people know and face the facts, I am giving the following non-technical thumb-nail sketch about the nature of the two diseases.

Syphilis is a dangerous, infectious disease. It is sometimes called "bad blood" or pox. Usually acquired by having sexual relations with a person who is infected, it is also spread by some kinds of "petting" and by kissing. Sometimes infection results from using some article like a common drinking cup, towel, lipstick or toilet just used by a person with the disease.

Syphilis is caused by a germ called the spirochete pallida. Seen under a microscope, it appears as a small, pale thread twisted into corkscrew shape. The germ enters the body through the moist mucous membrane lining the inside of the sexual organs and through cuts or wounds in the skin on any part of the body.

About one-half of all people with syphilis get it innocently. This is because others have been careless or did not understand the infectiousness of the disease. An infected person or anyone who has any reason to believe that he or she has been exposed to it should **KNOW FOR SURE** that the disease is not present before having sexual intercourse with anyone else. The law says that it is a crime to give the disease to another. Truly such is a crime against mankind.

Syphilis given to an unborn baby of a mother who has it, is called congenital syphilis. Many of these children are born dead. Some die within a short time, while four out of five of those who live will be sickly and deformed, unless they are adequately treated by a doctor. Properly treated, a baby with syphilis has a good chance for a longer, healthier life.

If all women with child knew the facts, babies would not be born with the disease. If the woman with syphilis is given regular treatment while she is pregnant, nine times out of ten, her baby will be born healthy. It is best to start treatment early. But even if treatment is started before the fifth month, more than likely the child will be born free of syphilis. No pregnant woman would fail to do the right thing for her coming baby if she knew the facts. Yet, the terrible crime of giving babies syphilis happens often. In our country, 85,000 babies are born with syphilis each year. Twenty-five thousand of those babies are born dead. Those statistics do not take into account the thousands of miscarriages caused by syphilis.

North Carolina law requires every woman to have a test for syphilis as soon as she knows she is pregnant. If she has syphilis, the law demands that she take treatments until cured.

Our law tries to protect each man and woman seeking to be married. Each must take tests to see if either has syphilis or gonorrhea before a marriage license can be issued. Men and women who know the facts are eager to protect themselves and the babies they hope to bring into the world. They do not try to circumvent the law. If either the man or the woman is diseased, the wedding must be postponed until the disease is cured. Then the marriage can take place with safety.

The only way to **KNOW FOR SURE** if you have syphilis is for a doctor to examine you and give you the all-important blood test. For the blood test the doctor takes a small amount of blood from a vein in your arm. Laboratory examinations of your blood enables the doctor to tell if you have active syphilis.

Any sore which does not heal in a short time, especially if it is on the genitals, should send you to a doctor immediately.

You cannot tell if a person has syphilis by the way he looks. There are very few outward signs. A person may appear clean, strong, healthy, and still have the disease lurking in his body.

Syphilis does not respect sex, age, race or color. People in all walks of life have it. There are more than six million people with the disease in our country. More than one-half million people contract it each year. One of the many indications of the prevalence of the disease in our State is that out of the first 134,717 North Carolina men who were examined for the draft, 11,550 had syphilis!

The first stage starts as a sore where the germs entered the body. This sore, called a chancre, appears in from 10 days to 10 weeks after exposure. The chancre may be as large as a twenty-five cent piece or so small that it may not be noticed. More than likely a woman will miss finding the sore. The sore will heal without treatment but the patient is not well. The germs are inside of his body. If treatments are started during this time, and continued long enough, cure is almost certain. Doctors can best diagnose the disease during this chancre stage.

The second stage causes such things as a pustular skin rash, mucous patches on the lips, the tongue and in the mouth, fever and sore throat. Spots of hair and eyebrows may fall out. Again, these symptoms may be so mild that they pass unnoticed. These signs, too, go away in a short time, but the patient is not cured. Such are just flare-ups of the terrible things that are happening inside of him.

The third stage: There may be two, or many years without other signs of syphilis. The patient thinks he is safe. Such is the great danger of syphilis. Many are lulled into a false sense of security. Then, slowly or all of a sudden, if regular treatments have not been administered, syphilis may kill, cause insanity, blindness, deafness, or paralysis. Untimely graves, insane asylums

and hospitals hold many untreated syphilitics.

The fully tested cure for syphilis calls for prolonged treatment with injections of arsenphenamines in the blood stream and bismuth, a heavy metal, in the hip muscles. Usually 70 injections, including a minimum of 30 of an arsenical drug, spaced seven days apart, are given. The continued search for a quicker cure consists mainly of efforts to concentrate treatment into a shorter length of time. A strong hope exists now that the research will prove that successful treatment may be compressed into a period of two months. The problem of the scientist in this field is to determine both the point of maximum efficiency of the germicide and maximum body tolerance of the drug. Treatment for syphilis must be given by physicians. No quack, home remedy or patent medicine has ever cured syphilis.

Gonorrhea has caused women more unhappiness and ill health than any other disease. Gonorrhea is caused by the gonococcus. A person may have both gonorrhea and syphilis at the same time. The drugs for syphilis will not cure gonorrhea. The drugs for the gonococcus will not kill the spirochete. Gonorrhea is usually contracted by having sexual relations with a person who has it. It may be spread through the common use of articles.

The gonococcus attacks the mucous membrane of the sexual organs, the eye and the rectum.

The incubation period is usually from three to five days. The first symptom is a flow of pus. There is a burning sensation and pain upon urination. A man can always tell when it starts. It is more difficult for a woman to know. Gonorrhea more often than not causes a woman very little pain at first. Many times women think the pus is leukorrhea. Any abnormal discharge should be examined by a doctor at once to see if gonococci are present.

While gonorrhea is a serious disease for a man to have, it is extremely dangerous for women. Gonorrhea is not ordinarily a killer. It can cause painful swelling of joints,

arthritis. It can cause either a man or a woman to become sterile. Many women are placed upon the operating table for the removal of sexual parts because their husbands thought they were cured. A doctor must be the judge. Women by the tens of thousands are invalids on account of gonorrhea. It is said that a million women a year have their Fallopian tubes, ovaries or uterus (or all of them) removed because of gonorrhea.

At some time in their lives, 60 men out of every hundred have gonorrhea. There are about four million new cases each year. Like syphilis, known infections constitute only a small fraction of those in the general population.

Gonorrhea has been one of the main causes of blindness. It is usually carried from infected genitals to the eyes by unwashed hands. The common towel frequently plays a part in transmission of the gonococcus to the eyes.

Formerly many babies became blind because of gonorrhea. Unlike syphilis, the germ does not get to an unborn baby while it is in its mother's uterus. The germs get in the baby's eyes while it is being born. Now there is very little blindness in babies from this cause, for our law requires that as soon as a baby is born, a certain drug must be put in its eyes to kill the gonococci.

Many young girls get gonorrhea before they mature. The front part of the genitalia of female children is very delicate and easily acted upon by the gonococcus. In a few days after a young girl is infected, she will have a burning or itching feeling especially upon going to the toilet. The parts may be red and raw and covered with pus. There might be pus on her clothing or bedclothes. The symptoms are similar to those in the adult. Young girls can get it from toilet seats or articles used by another who has the disease. Most young girls catch it from a member of her family or from a friend. The child frequently gets it from sleeping with her mother or older sister.

By old methods of treatment, it was difficult to cure gonorrhea. The discovery of sulfa

drugs has changed the methods of treatment of the disease. Nearly all men and women can be cured, if they start treatment soon enough. These sulfa drugs should be taken under a doctor's orders and supervision.

Men and women need good health to do efficient work in the home, the factory, or the office. Syphilis and gonorrhea can take away the ability to do a good job and the capacity to enjoy life. You need not fear working with anyone or having someone work for you who has syphilis, if the person is taking a course of treatments.

Chancroid is a disease different from either syphilis or gonorrhea. It is an infectious sore appearing on the outside of the genitalia. It can cause much damage to tissue. Often the chancroid is mistaken for chancre. Some patients have both syphilis and chancroid. Physicians have dependable methods for the diagnosis and treatment of the disease.

Syphilis and gonorrhea occur only in human beings. Animals and insects do not harbor them. For this reason we only get the disease from other human beings who are infected. For control of venereal disease we do not have to look further than people. If all men and women free themselves and their children of syphilis and gonorrhea, there would be none left. There is no other reservoir of infection.

These diseases have come to us through hundreds of years because during no other time have there been cures for them. That gives us a wonderful opportunity and a duty. We should not let the diseases pass to people now living or to the people yet to be born.

You want your children protected against smallpox and typhoid. They can obtain immunity from those diseases but for the venereal disease, there is no vaccine to produce immunity. Why not arm your children with the facts to guard them against syphilis and gonorrhea? You are your child's first teacher. It isn't too early to start teaching simple sex facts to your child when he is kindergarten age. You can start teaching your child about sex and the dangers of venereal

diseases or he will pick up false ideas from playmates. You must learn the facts to be able to teach your child. Knowing the truth is the only thing which will protect your children, and your neighbor's children, and their unborn children. Truth shall make

men free.

You must make it your business to see that you, your loved ones, your home and your town are rid of the curse of syphilis and gonorrhea. It can be done. It must be done.

Venereal Disease Control in North Carolina

By J. C. KNOX, M. D., Director

Division of Epidemiology and Venereal Disease Control
North Carolina State Board of Health
Raleigh, North Carolina

THE epidemiologist must consider the venereal diseases as he does any other communicable infection. He cannot fail to regard them as among the greatest dangers to public health, and he must deal with them vigorously if they are to be controlled. Syphilis and gonorrhea are diseases which may attack any of us, and the blunder of classing them as the wages of sin is a costly one. Any confusion there of scientific and moral questions by the epidemiologist is likely to be disabling.

The most effective work of the epidemiologist always is in the sphere of prevention. The ultimate aim of the venereal disease program is prevention of the spread of these infections. We have set up clinics for treatment of the infected all over the State, but we must bear in mind that treatment and instruction of the sick really are means to the end of prevention. Regardless of how much concern he may have for the sick individual, the epidemiologist must view his work as primarily directed to limitation of the infection.

This concept is the inspiration of the Federal and State provisions for free treatment. We know that the person with syphilis is non-infectious when under proper treatment with the arsphenamines and that he can be rendered permanently non-infectious by ade-

quate dosing. State law requires that all identified sufferers from these venereal infections shall take treatment until they are cured. The legal compulsion is in the interest of epidemiological control. It would be unwise and unjust to require treatment without providing free treatment for those who are unable to pay for private medical care.

Teaching and treating the infected have gone along together in the program of the State Board of Health. Great progress has been made in both. Greater still will be the effort in the future. The ignorance of the public and the disgrace attached to these diseases have been a great hindrance in the work. People have been willing to learn how to avoid tuberculosis, typhoid and the entire roster of human ailments. But when it comes to syphilis and gonorrhea, the tabu has been firmly applied. Perhaps this has had its effects upon philanthropists, too. They have been willing to endow institutions for the study of and the cure of all illnesses except those caused by the spirochete and the gonococcus. There has been a shining exception to that rule in North Carolina.

Up to 1938, the State Board of Health was active in fighting these diseases. During that year great impetus was received from two sources. The United States Congress made available large funds to attack the venereal

diseases. The other outstanding event was that the Zachary Smith Reynolds Foundation decided to donate the income from about seven million dollars to the State Board of Health to aid in a long range program of syphilis control.

Probably, the benefaction of the Zachary Smith Reynolds Foundation is the largest single gift for this purpose ever made by any public or private organization in the nation. Those funds, added to United States Public Health Service funds, have enabled the State Board of Health to organize, in collaboration with city and county health departments, an effective system of treatment. At present 306 clinics for venereal disease control are operating in the State. Treatment is free for those unable to pay. During the past biennium, 74,408 different people were treated in the clinics for syphilis alone. In 1937, there were 52 VD clinics, which treated only 7,817 cases. The clinics not only give treatments, they get at the sources of the infections. The clinics follow through by bringing those other infected men and women into the clinics for treatment.

Venereal disease control has been assisted by the assignment of a venereal disease consultant for this State by the United States Public Health Service. In addition, public health doctors and nurses were added to the staffs of counties in the defense areas. Case-finding and case-holding personnel have been made available to the local health departments.

Physician-education in venereal disease control has been an outstanding feature of recent activities. All doctors in the State must be enlisted in the campaign if it is to have marked success. The clinics reach only the infected ones who cannot afford a private practitioner. The State Board of Health advocates that each doctor, each hospital, give every patient a blood test as a routine part of physical examinations. We must locate all infections and cure them in order to wipe out the venereal diseases.

The most recent forward stride in the fight against these diseases was the organization

of the Venereal Disease Education Institute, under the direction of Capus Waynick. It is another North Carolina "First", being the only unit of its kind in the country. I know the public clinics, the doctors and the private clinics will welcome our new ally in the war against the two plagues.

It has long been recognized by the medical profession that prostitutes, "loose women", "charity" or "party" girls were large spreaders of venereal disease. They have been regarded by many as constituting the largest reservoir of these diseases.

It is also axiomatic that a nation is no stronger than the general health of the individuals who compose it. We learned that during World War I when more than 7,000,000 man-days were lost by our fighting forces on account of syphilis and gonorrhea. During the present struggle for existence, we not only found that an alarming number of our men were rejected from military service because they were infected, but we realized that those diseases were hampering the efforts of the men and women working in war industries.

An attempt has been made to reduce one of the great sources of the infections, prostitution, by vigorous repression measures. Of course, no one would advocate killing prostitutes as we would malaria mosquitoes or typhus carrying lice. Federal authorities have been enforcing the May Act in part of this State and that has been helpful. To arrest and hold prostitutes until they are cured of infections, meanwhile training them in ways to earn an honest living, has socially constructive possibilities.

Dr. Reynolds has been vigorous in encouraging repression of prostitution. His activities were recognized by the State Board of Health in this recent resolution: "That the Board endorse the policy of its Secretary, Dr. Carl V. Reynolds, in his efforts to suppress venereal diseases and prostitution not only around the military areas in North Carolina but also among its civilian population. V.D. control in North Carolina is a public health problem and it is a fixed policy of the Board to give

all of its efforts to the improvement of this situation. We feel that progress is being made and we assure Dr. Reynolds of our full cooperation in the continuance of this program."

North Carolina has a comprehensive set of laws aimed at the eradication of prostitution. Even those other than prostitutes who profit in the nefarious enterprise may be severely punished. The enforcement of those laws in our State is another thing. Only through an aroused populace may we expect to control prostitution. Only through an enlightened people will we be able to cope with the socio-economic factors which promote the recruitment of girls into that "trade".

The diagnosis of venereal disease requires highly scientific procedure. Among its many

other functions, the State Laboratory of Hygiene, under the direction of Dr. John H. Hamilton, assists the clinics, doctors and hospitals of the State with laboratory examinations. The story of the immense effort in this field, during the past biennium, is summed in the fact that Dr. Hamilton's technicians made 21,714 microscopic examinations for gonorrhea and ran the huge total of 1,049,621 serological tests for syphilis. (223,047 were for Selective Service.)

The State has a well-equipped and well-staffed health laboratory. An efficient laboratory is essential in speeding up the finding of syphilis. The State laboratory helps cities, towns and counties in their control problem where local maintenance of adequate laboratory facilities is impracticable.

The Venereal Disease Education Institute

By CAPUS WAYNICK, *Director*

The Venereal Disease Education Institute
North Carolina State Board of Health
Raleigh, North Carolina

ENTRY of the United States in the present world war emphasized the importance of another war in which our country is engaged. With varying fortunes, a war against the venereal diseases has been

underway since about the time the first world war ended. When the new war came upon us, with its call for all the workers and fighters the nation could marshal, missing military divisions and lost man-hours in industry chargeable to venereal infections revealed the importance of the struggle against syphilis and gonorrhea.

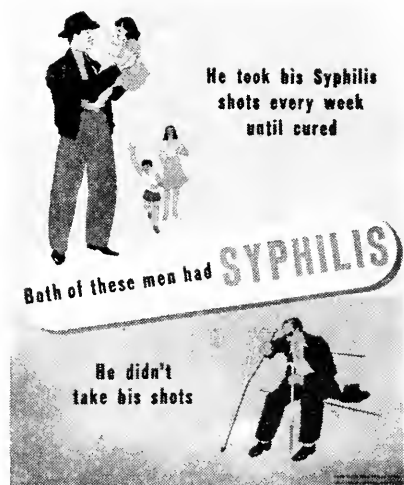
Our country is not the only one to realize that these diseases are allies of the military



The Mark of the Venereal Disease Education Institute.

forces leagued against us. General Giraud, now in command of the French in North Africa, gives venereal infection as a reason for France's collapse. Giraud writes: "In a race formerly solid, rustic, tough against fatigue, but where alcohol and syphilis had opened suppurating wounds, the skeleton shrunk, the tissues became lax, the resistance disappeared." That's a Frenchman's estimate of France.

On the other side of Europe, Germany found unexpected resistance. Russia put up a stubborn, heroic fight. Russia proved to be "tough against fatigue", Russian tissue was not lax. That immense country, where venereal infection once was general, has been winning the war against syphilis and gonorrhea. Quentin Reynolds recently wrote that there is practically no "venereal disease in the Russian Army". Since the revolution, the Soviet has given free treatment for all infect-



Clinics Are Using This Poster from Maine to California.

ed and, what is more important, Russia has been teaching sex hygiene throughout her school system beginning in nursery school and kindergarten.

As early as 1937, Dr. Thomas Parran, now surgeon-general of the United States, after a European tour, wrote that Russia had practically wiped out commercial prostitution and was gaining ground rapidly in control of the venereal diseases.

Giraud does not say that syphilis caused the fall of France, but he lists it as one of the chief causes of French failure. The venereal infections are among the great handicaps of the United States as we defend ourselves now. Wherefore victory over these diseases may appear in long retrospect more important than the outcome of any military struggle. Tyrants must be opposed and put down as they rise but a people mentally and physically healthy cannot be kept long in bondage. On the other hand, there is no enduring freedom for the unhealthy.

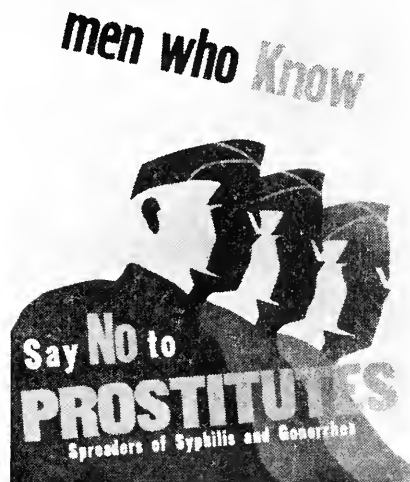
We have kept our heads buried in the sand. For many years the very names of the venereal diseases were banned by press

and radio. So complete was the taboo that few Americans knew that syphilis probably is killing more people than any other disease. At least 100,000 Americans die of syphilis every year. The official reports list some 40,000 of these deaths as "heart failures" and few of them are recorded as syphilitic deaths. But doctors estimate the syphilis death rate and specialists say the 100,000 yearly is a conservative figure.

Never in our most reckless year have we killed half that many in automobile accidents. No one year of any war in which we have engaged has required half that many lives.

Probably at least 6,500,000 Americans have syphilis and doctors say that 60 out of every 100 men catch gonorrhea at some time in their lives. Both diseases are epidemic in North Carolina. Both diseases are preventable; both are curable. Both are caused by germs of which the human being is the sole carrier. Once the infections in man are cured, these great plagues will disappear.

Syphilis kills many and maims many others. Large numbers of the insane, the lame and the blind are victims of the infection. Each year 25,000 American babies die of the disease before they are born and 60,000 others



are born with the infection. Gonorrhea accounts for many serious operations on women and for a great percentage of the cases of sterility in both men and women. Both diseases cripple when they do not kill.

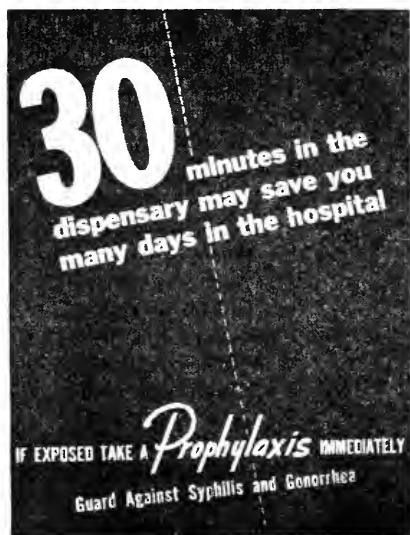
For 30 years doctors have had a cure for syphilis. If the infected would take the cure, the country could be freed of this disabling disease. Not until the last several years, has there been a specific cure for gonorrhea. The experimentation in the Sulfa drugs has developed a cure. Sulfathiazole is effective in most cases of this infection.

Some progress in control has been made in this country. Most of the States have laws requiring the treatment of all identified cases of venereal infection until they are cured. We have that law in our State. All the States are maintaining, with Federal aid, free clinics for those who have the diseases and cannot pay for private medical care.

In North Carolina 306 clinics are open. The State Health Office, Dr. Carl V. Reynolds, was a pioneer in advocating the present kind of drive against these diseases. He enlisted the interest of the trustees of the Zachary Smith



The Cover of the New VD Education Pamphlet.



For Bulletin Boards of the Armed Forces.

Reynolds Foundation in the program and this State receives a large financial contribution each year from the Foundation for the furtherance of the fight. This is in addition to the State's participation in the Federal funds.

Doctors know the truth about syphilis and gonorrhea but others do not. The medical men who are in the thick of this fight feel the need for more general popular education in the subject. They know that these diseases cannot be controlled until the people understand them; and they are confident that they can be wiped out by scientific treatment when the people do know the truth about them.

The need of lay help in public education about these diseases has been recognized generally by the specialists. The Venereal Disease Education Institute, set up in North Carolina under the State Board of Health, and supported by the United States Public Health Service and the Zachary Smith Rey-

nolds Foundation, is charged with the duty to help in this education.

The Institute has a staff of artists, writers and other specialists and is set up to originate educational materials and techniques and to

demonstrate their effectiveness. Through demonstration and evaluation of these materials and methods, the Institute is expected to be helpful in venereal disease education not only in the State but throughout the country.

Important Intestinal Parasites In Western North Carolina

By DR. WILFRED N. SISK
County Health Officer
Asheville, North Carolina

THE term intestinal parasites includes a great many animals which infest the intestines of man. The term usually is used to mean any animal found in the intestines. These animals may be composed of only one cell and be so small that a microscope is needed to see them, or they may be, like the large tape worm, 15 or 20 feet long.

There are only 2 intestinal parasites found in large numbers in Western North Carolina. They are the *Ascaris*, or stomach worm, and the *Oxyuris*, also called the Pinworm, thread worm, or seat worm. The most important one is the Pinworm. It goes, as I have stated, by the technical name of *Oxyuris*. This is a little worm about a half inch long and about as big around as the ordinary straight pin. It is found all over the world, particularly in cities. It is spread from person to person by close contact and particularly by sleeping in the same room and especially by sleeping in the same bed. If one gets the egg from the Pinworm in the mouth and swallows it, the little egg shell is digested off in the stomach. Then the little worm begins to develop and grow. It grows in the stomach and intestine for 2 weeks. At the end of this time it has grown and is ready to lay its eggs. In each female worm there are about 10,000 eggs. When we remember that the Pinworm is about half the size of an ordinary straight pin, then we get some idea how small these 10,000 eggs are. During the night while the patient sleeps, the little worm comes out of the

intestines onto the skin around the rectum. There it wiggles around causing the sleeper to itch and to have bad dreams. It lays its entire load of 10,000 eggs and then withers and dies.

Now all these 10,000 eggs spread around as the sleeper moves and get on his night clothes and bed clothes. Because of the itching, he is likely to scratch in his sleep and get some of the eggs under his fingernails. Then someone comes in to make up his bed in the morning and in shaking the sheets fills the air of the room with these tiny eggs. The eggs are spread around in the air of the entire room and have even been found in the dust of the molding around the top of the room. This bed-maker is very likely to breathe in or swallow some of the eggs and get the delightful little process started over again. In the meantime, the sleeper has put his fingers on his food and swallowed a few more eggs himself. As this procession goes on, soon the entire family is infected with Pinworms.

You might ask whether such a small parasite could cause much damage. I assure you that it is quite serious, and that it causes more damage than we ordinarily realize. First of all, it causes restlessness in the sleep. Very frequently in children it causes them to kick about and be wild in their sleep, as the country women frequently express it, the children are "frenzied." They wake up crying out very much frightened. Sometimes they walk in

their sleep. Very frequently the Pinworm causes a very poor appetite, and as a result the child frequently loses weight.

A good example of what may happen is the case of a young girl 11 years old who was brought in to me some months ago. Her mother stated that she had very little appetite for breakfast. She would take two sandwiches to school and bring one or both back uneaten, and her appetite was poor for supper. The girl was quite restless in her sleep, waking up frequently at night. She had circles under her eyes and was quite thin and nervous. When the specimen was examined she was found to have a very heavy infection with Pinworms. Her mother had never suspected the Pinworms. I examined the entire family and found that everyone in the family had Pinworms. Two of the boys in the family also had Hookworms. The entire family was treated at one time with a new treatment which is just being developed. Within 2 weeks after the treatment was completed, the girl was eating a big breakfast, so big that the school bus had to wait for her to finish. She then took 4 sandwiches to school for lunch. After eating all 4 sandwiches she came home saying she was still hungry. Her sleep became restful, and she stopped having bad dreams.

The big question is how to know whether one is infected with Pinworms. The first thing to do is to look for the symptoms. If your child is restless in his sleep and has a poor appetite, it will certainly do no harm to examine him. The examination is very simple, and you can do most of it yourself. If you want to look for the worms themselves, they come out of the rectum during the night. If you spread the child's buttocks apart after he has been asleep for an hour or two, you will frequently find one or more of the little Pinworms crawling about. Remember that they are only about $\frac{1}{2}$ an inch long. If you catch one this way put it in a small bottle of ordinary rubbing alcohol so that you may show it to your doctor. If you are unable to catch one in this manner, your doctor can show you how to make a little cellophane swab which can be rubbed about

the rectum in the morning. This will pick up the Pinworm eggs so that your doctor can find them under the microscope. It is important to remember that if one member of the family is infected, then the entire family is also infected. Also remember that the Pinworm may not come out more than once every two weeks. It is very important that a proper cellophane specimen be taken since the ordinary examination of the feces does not show this worm.

Then comes the treatment. This, of course, must be taken as directed by your doctor. It is dangerous to do otherwise. The drugs that are used for this purpose are very simple and easy to take. They must be taken over a number of days, and the entire family must be treated. This is quite important, for otherwise it is impossible to get rid of all the Pinworms.

The last question, and in some ways the most important, is just how frequently do we find Pinworms. Surveys have been made in numerous cities all over the world. They have found that Pinworms are more frequent in crowded conditions, that is in homes where several people must sleep in the same room. Cleanliness has something to do with getting the infestation, but once gotten, it cannot be cured by cleanliness alone. It is more frequent in the poorer homes, but it may be found anywhere. Of 275 children which I examined in one school in this county, one out of every 5 was infected. The figures are even higher in the poor sections of most cities. In Washington, D. C., 1 out of every 3 children examined had the infestation. In Charlotte about 1 out of every 3 children in the group there were infected. In some groups of poorer children from cities such as Toronto or New Orleans, 9 out of every 10 children examined were found to have Pinworms. They have been found all over the world, in the Orient, in America, in Europe, and in the tropical countries. They are particularly prevalent in crowded orphanages.

The second parasite of importance to us in Western Carolina is the *Ascaris*, or the so-called stomach worm. This worm looks very

much like a very large ordinary fishing worm. There are several different kinds of *Ascaris*. One infects dogs, and cats, and another infects pigs and so on. These all look just like the type that infects the human, but they are different, and the pig or dog type will not grow and live in the human intestine. The human type is about the size of an ordinary pencil. It may cause little trouble or much trouble depending on the number of worms present. The usual effect is simply that of a poor appetite and poor nutrition. The worm takes the food that the child should have. In severe cases, however, it may cause fever and frequently convulsions, and in any case it is a serious infestation. The worms crawl into small openings such as the bile duct and the appendix. When they get into these small places they cause a great deal of trouble.

The *Ascaris* is very easily found by an ordinary feces examination. This is understandable when you realize that each female worm lays 200,000 eggs in the intestine every day. I have gotten as many as 45 *Ascaris* from one 4 year old child. When you multiply 45 by 200,000 you begin to get some idea of how many eggs are passed out of the intestines every day. When this infected matter is allowed to get on the ground instead of in the toilet, the eggs infect the play ground. These eggs live for 5 years so that children playing on an infected yard have plenty of opportunity to get a few eggs on their hands and swallow them.

Your doctor can help you with the treatment of this condition. There are quite a number of drugs on the market which will do the job well. I would like to caution you, however, that there is some danger in treating yourself so that it is best to have your doctor's advice in picking the drug best suited to your condition.

The *Ascaris* is very prevalent in Western North Carolina. Of several hundred children that I have examined, about 1 out of every 4 had *Ascaris*. This worm is found in the rural areas of the Southeastern United States. It is also prevalent in the tropics.

This article concerns the 2 intestinal parasites most frequently found in Western North Carolina. I have not discussed Hookworm, because I have had very few cases to deal with. The Hookworm is found in places with a loose, sandy type soil so that there are very few found in the mountainous areas of North Carolina. Hookworm infection is an important and serious thing whenever it is found. I occasionally find a few tape worms, but these are even more rare than the Hookworm.

In conclusion I would like again to stress the symptoms caused by these parasites. The Pinworm causes restlessness in the sleep, nightmares, and poor appetite. The *Ascaris* causes malnutrition, fever, and sometimes convulsions.

I cannot stress too much that the treatment is dependent on the type of parasite present. Your doctor can best advise you what drug to use and can tell you how to use that drug. In Pinworm infections it is absolutely necessary to treat the entire family.

BOOKS

MICROBES WHICH HELP OR DESTROY

US—by Paul W. Allen, Ph.D., Dr. Frank Holtman, Ph.D. and Louise Allen Mc-Been, M.S., Cloth. Price \$3.50, Pp. 540. St. Louis: C. V. Mosby Company.

MINERALS IN NUTRITION—By Zoltan T. Wirtschafter, M.D., Cloth. Price \$1.75, Pp. 175. New York: Reinhold Publishing Corporation.

YOUTH LOOKS AT SCIENCE AND WAR—Paper, Price 25 cents, Pp. 144. New York Science Service, Inc. and Penguin Books, Inc.

HEALTH EDUCATION OF THE PUBLIC—

By W. W. Bauer, M.D., and Thomas G. Hull, Ph.D. Cloth. Price \$2.75. Pp. 315. Philadelphia: W. B. Saunders Company.

PARENTHOOD IN A WORLD AT WAR—



By Joseph Miller and Marie Miller. Paper. Price \$1.00. Pp. 109. Harrisburg: Pennsylvania Congress of Parents and Teachers.

GONORRHEA
*can be
 cured*
*Quickly
 Painlessly
 Cheaply*
**See your DOCTOR
 or Health Officer**
 NORTH CAROLINA STATE BOARD OF HEALTH

He took his Syphilis
 shots every week
 until cured

Both of these men had **SYPHILIS**

He didn't
 take his shots

**America needs
 strong men
 and women**

You can help....
 by guarding against
Syphilis and Gonorrhea
 NORTH CAROLINA
 STATE BOARD OF HEALTH

Keep Your Service
 Record From Reading
*"Wounded by Syphilis
 and Gonorrhea"*

if exposed
Take a Prophylaxis promptly
 NORTH CAROLINA
 STATE BOARD OF HEALTH

These four Venereal Disease Education Institute posters, designed for the VD education demonstration being made by the State Board of Health in North Carolina, will be used also throughout the nation. The four uses: clinic caseholding; washrooms; armed forces; the public.



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APRIL, 1943

No. 4



MRS. H. P. GUFFY, R. N.
Veteran Public Health Nurse

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters).	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
The Expectant Mother.	Diet List: 9 to 12 months; 12 to 15 months;
Breast Feeding.	15 to 24 months; 2 to 3 years; 3 to 6 years.
Infant Care. The Prevention of Infantile Diarrhea.	Instruction for North Carolina Midwives.
Table of Heights and Weights.	

CONTENTS

	Page
Notes and Comment.....	3
Public Health Nurses in Local Departments	5
Malaria and War	8
Why Eat Greens?.....	11
Food For Victory.....	12
Immunization Policy.....	15

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CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

Notes and Comment

By THE ACTING EDITOR

A VETERAN MRS. H. P. Guffy is a veteran public health nurse. She was a pioneer when pioneering was the order of the day. To quote her own words, "In the early days we travelled by every method known to man, boats, mules, horses, walking railroad ties to lumber camps, gripping laurel and branches of trees to swing to our destination." The enthusiasm and energy which she manifested as a pioneer have been carried into the work of today.

* * *

MISS HAY For the nurses, sanitarians and followup workers recruited to take the Orientation Course offered to men and women who were willing to render service in county health departments during the present emergency, a considerable number of addresses and speeches were made during the two weeks used for this course. Workers representing most of the activities in the modern public health program outlined the endeavors in which they are particularly concerned. The address of Miss Ruth Hay gives us a glimpse of the useful service which a public health nurse can render. We feel that our readers will better understand and appreciate the public health nurses after having read Miss Hay's paper.

* * *

MALARIA The disaster which malaria has already brought to some of our military campaigns and the threat which it is making to some of our other endeavors give us a keen appreciation of its

real importance. Mr. Ashton has outlined in the paper which he prepared for this issue of the Bulletin some of the facts which we must face, if we are to combat this disease intelligently. In by-gone years malaria has exerted its toll within the confines of our own State. All too frequently we have faced it with indifference; occasionally we have adopted effective means in combating it. It is probable that we will be called upon to fight it more intelligently in the future than we have in the past.

* * *

GARDENS Both Miss Tansil and Mr. Richardson have timely articles in this issue of the Bulletin. All thoughtful people will exert every effort to assist in solving our present food problem and the nutrition problem which is an integral part of it. Victory gardens will be numerous when spring extends its inviting hand. Spring is the season of optimism—We have fond hopes in the spring and feel that our enthusiasm will endure. However, when the warm days of summer appear our early enthusiasm seems to melt away. It is then that we must exert real effort if many of our victory gardens are to serve a useful purpose.

In the May 24, 1942 issue of the New York Times there appeared an editorial which may or may not be prophetic. Since it carries a word of warning as well as a word of challenge, we feel that it should be reproduced.

"Pastoral—The early peas are beginning to reach for something to climb on. Sweet corn

is knifing up in the sunlight. Carrots are waving first green leaflets, and bush beans are acting as though Jack had done the planting.

"That backyard vegetable garden is making all kinds of promises. The season has been 'right', judging by results. The April drought seems to have succeeded only in warming the soil ahead of time and persuading the seeds that they should be up and about their business. And the rains that finally came just added the finishing touch. Things are looking downright sassy, and now we can begin to fret over bugs and beetles.

"But while we're fretting, we can watch the strawberries ripen—and call the thieving catbirds every name we can lay our tongue to. And we can—and will—do the weeding. Of course, a weed is only a plant out of place: so say the botanists. But why do so many plants lose their sense of direction in a garden? Why do so many never learn their place?

"Bugs and beetles, worms and weed—there's many a slip 'twixt the seed and the lip. The season's young. Not even the mystic V over the entrance can assure complete success. But half the fun of a garden, if not quite half the actual dividends, comes from the gloating that we can do in May. Standing there now, in the midst of the hopeful ranks of young plants, we're downright proud of our achievement. So proud that we can even spare a little of the credit to Nature herself. But we're warning Nature that if she doesn't do something about those weeds, we may be of a mind to turn the whole thing over to her along about the Fourth of July."

* * *

HEARING If we are to have a well rounded health program in North Carolina, it is well that we look occasionally to the work which is being done in other states. On previous occasions we have referred to the work which others are doing for those children who have defective hearing. From the January Number of the "Michigan Public Health" we wish to quote the following:

"Michigan's new hearing conservation pro-

gram, organized by the Michigan Department of Health and the State Department of Public Instruction, is a program especially planned to help hard-of-hearing children.

"Objectives of the program are four-fold: (1) To discover the real and potentially hard-of-hearing children so that every effort may be made to conserve their hearing. (2) To obtain medical attention for all hard-of-hearing children to determine the cause, degree and possible outcome of the defect. (3) To endeavor to obtain specialized instruction for the handicapped children when needed. (4) To educate parents and future parents to practice better hearing health.

"Audiometric hearing tests, under State Health Department supervision, will help to carry out the first objective. Two audiometers will be used. The first is a group audiometer which tests up to 40 children at one time. These are essentially screening tests. They indicate hearing defects which need further investigation. Children with these defects will be given tests on a pure-tone audiometer. This is a precision instrument which tests the child's hearing over a wide range of pure musical tones. The slightest defect can be detected by the pure-tone audiometer.

"The second objective of the program is obviously an essential one. There would be little gain if the hearing conservation program ended with the discovery of children with defective hearing. The important thing is to get the handicapped child to a physician so something can be done to help the youngster.

"The third objective—to endeavor to obtain specialized instruction for handicapped children when needed—will be carried out largely through the cooperation of the State Department of Public Instruction and the local school authorities.

"The fourth objective—to educate parents and future parents to practice better hearing health—emphasizes the prevention of hearing defects."

The hearing program in the State of Oregon has been carried on long enough that they can submit a progress report. In the "Weekly

Bulletin" of the Oregon State Board of Health we find the following:

"The efficiency of a public health program should be demonstrated by results. Often these results are not so tangible that they can be presented in statistical form. The Oregon Program for Conservation of Hearing has continued long enough to determine the extent to which follow-up and medical attention have contributed to conserving hearing of children.

"As reported in previous bulletins, the most important phase of a hearing conservation program is to persuade parents to obtain medical attention for the children who are found deficient in hearing. The opportunity for discussing this with parents is provided in the Oregon Plan through an invitation to parents to come to the school house to discuss the hearing problems with the Public Health Nurse and the Consultant in Hearing and Vision. It is significant that in the school year, 1940-1941, 55% of the parents whose children were deficient attended these meetings and 72% of these promised to see their physicians. In the 1941-1942 school year, 72% of the parents attended and 86% of them promised to consult physicians.

"A measure of sincerity of their promises was what really happened. During the 1940-1941 survey, 270 parents promised to see 80

different doctors. Actually, 315 parents saw 89 doctors. Through homes visits, the nurses were successful in obtaining 45 medical examinations not promised at the school interviews.

"Incidentally, the above figures indicate the extent to which physicians of Oregon participated in the program. In the two-year survey, 227 different doctors were named by the parents for medical examinations of their hearing-deficient children. The sheer fact of participation by so many physicians in itself is a technique productive in promoting conservation of hearing.

"The value of this technique is proved by retesting 346 children and ascertaining what changes in hearing have occurred. Fifty-eight percent, or 198, consulted physicians and 148 did not.

"Of those who consulted physicians 44% remained the same compared to 48% who did not consult physicians. Of those who saw physicians, 47% showed improvement compared with 25% who did not see physicians. Of those who went to physicians 9% showed worse hearing compared to 27% who did not go. In other words, twice as many improved their hearing who saw physicians, and one-third as many acquired greater losses as those who did not see physicians."

Public Health Nurses in Local Departments*

By RUTH HAY, R. N., M. S.
Professor Public Health Nursing
School of Public Health
University of North Carolina, Chapel Hill, N. C.

GREETINGS, Workers in the field of public health.

Throughout this brief but highly concentrated orientation course you are being given information and directed to sources of materials which will help you to do an acceptable job in this war emergency. No doubt by now

you are literally breathless and sometimes feel that you have passed the saturation point. I am confident that this well planned and conducted program has served to open up for you the infinite possibilities in the field of

*Address to nurses, sanitarians, and follow-up workers taking the Orientation Course recently given to emergency public health workers.

public health. You know by now that in order to do your particular job well it will be necessary to keep constantly on the alert. The word orientation itself indicates an effort to set your faces to the east, to get you off to a good start in the right direction. Those who are responsible for your selection and for this orientation program have guided you to a good beginning. The rest is up to you. It is you who will determine your effectiveness in the work in public health for which you have been selected.

You have heard from various experts about public health organization and programs and the responsibilities and functions of the various workers—health officers, public health nurses, sanitarians and follow-up workers. I have been asked to picture for you the background and work of the public health nurse and her relationship with various members of the county health departments.

Public health nursing has a rich and interesting history. I shall touch upon it very lightly here, only enough to help towards an understanding of us and our relationship with other representatives of the public health group.

1. Environment sanitation was the first major concern of public health and is still a very important part of the program. A clean water and milk supply.

2. Communicable disease control, the second major service, followed when Louis Pasteur opened up the field of discovery that bacteria caused certain diseases.

3. With all this scientific knowledge about the necessity of a clean water and milk supply; with the discovery of bacteria as the cause of disease came the need for getting these scientific facts out of the laboratory to the people so that they could put this information to good use. Here is where the graduate nurse emerged from the hospital to work in the community. For thirty years the nurse had given bedside care to the sick in their homes. Not as a private duty nurse on full-time basis, but in the capacity of a nurse who gave care in several homes and taught mothers to give the necessary care for the rest of the day.

Lillian Wald, who is to public health nurses what Florence Nightingale is to nurses, had independently of the public health movements developed a nursing service at Henry Street (East Side New York). These nurses with the House on Henry Street as their center went into the homes to care for the sick, to show mothers how to keep clean milk sweet and clean and safe for their babies. She demonstrated to the Board of Education that communicable diseases could be controlled. She adapted her techniques and skills of the hospital to what could be done in the home.

What Lillian Wald and the Henry Street Nurses did was only one example of what was being done in many cities as far west as Denver. And so at the turn of the century when doctors, sanitarians and research people realized that the scientific findings needed to be in the hands of the people the public health nurse was there. Since she was already a welcome visitor in the homes and schools, it was only natural that she was the one to translate the principles of personal hygiene into terms that the general public could understand.

And so at the beginning of the century the public health nurse assumed the role which she is still playing and will continue to play.

To illustrate—let's spend a day with the public health nurse.

8:30 Report at office to get new calls and pick up bag and records for the day. Started out in the trusty Ford.

9:00 Arrive at 2-room rural school. Consultation with teacher about the plan for health examination and immunization against diphtheria the coming month. Talked with children explaining purpose of visit and asking them to take invitations home to their parents to come in at the time the doctor would be here next week.

10:30 After a drive over hill and vale arrived at "Dobbs Corners" where at the back of the small general store lives a young family, mother, father, and 5-year-old Helen, who is the pet of the men who gather around the old base burner to

swap stories and whittle away the time. Mrs. A. is grateful for the advice about little Helen who has been under medical and nursing health supervision of the health department ever since several months before her birth.

11:15 Drove on to the next ranch to see how Mrs. B. and the new baby were progressing.

11:45 Called on Evelyn C., a young girl in her teens who recently, upon examination at a tuberculosis clinic, had been diagnosed as moderately advanced tuberculosis. Six children, mother and father in family and several chums are contacts which must be followed up, as well as the source of infection found. Evelyn waiting for a bed in the sanitarium, and in the meantime the family needs instruction as to her care and their protection.

12:30 Drew up on the side of the road on a hilltop overlooking "Round Valley" to have the box lunch.

1:15 Prenatal visit.

2:00 Infant and preschool conference. All set up by volunteer groups.

Assistance to M. D.

Parent consultations with two appointments to come into home to demonstrate preparing milk formula prescribed.

4:30 Enroute to health center.

In addition to these, the nurse may have to talk to the P.T.A., a meeting with the teachers, periodic staff conferences, etc.

Special visitors may come and innumerable calls are made upon her to participate in this or that group or activity, etc. It is quite apparent to you, I'm sure, that this public health nurse had to make decisions, give advice and help the person to see the value of it to the point of following it. Moreover, she had to know the policies of the health department and resources of the community. Then, and even now, our schools of nursing do not prepare us adequately to accept these responsibilities in a community health service. We learn how to care for sick people but we rarely

learn how sickness can be prevented. Our position in the hospital is entirely reversed from that in the homes. In the hospital the nurse is the hostess and the patient the guest. The patient is wholly dependent upon the nurse for care. The mother is the hostess in the home and whether you are welcomed as a guest or accepted as an intruder depends upon the public health nurse. The mother can't be dependent upon you, for you are there for only a short time. On the other hand, you may need to help her to develop an assurance and independence in carrying out the doctor's orders or in doing something for that child,—diphtheria immunization.

The institutional nurse has the hospital as her whole field of activity, the public health nurse the community with its various resources. The hospital nurse cares for the patient as an individual. The public health nurse sees him as a member of a family unit in the community.

The hospital nurse has direct supervision of head nurse. Doctors are readily available. The public health nurse has to assume responsibility, use her own initiative and work with standing orders of her health officer to guide her in the medical aspects.

The modern public health nurse brings to her work the training of a graduate registered nurse; special study in the control of communicable disease; the recognition of social problems and the study of human behavior. She has a reservoir of scientific facts. She has learned that she must be resourceful, use her own initiative and judgment. She must be patient and vigilant in her teaching and realize that people must know the reason for the thing advised before they will put it into practice. She is thus equipped to assist the physician in the care of the sick; the health officer in carrying out the policies and program of the health department, the sanitarian in the control of the environment; the teacher in classroom activity. Through her work in families and in groups she helps them towards a better understanding of how to keep themselves and families healthy.

During your field training orientation period

and subsequently in your assigned work you will see this public health nurse in action. Under her guidance the nurses among you will perform some of the duties of the public health nurse. You will work by her side in the clinics. You will take an active part in helping her to maintain a smoothly running, efficient clinic, and at the same time see that the patient has every consideration. You will want to uphold the standards and high purpose of her profession. You will be proud to be an aide in carrying on the work of this specialty in nursing. You will find that the public health nurse with whom you work will be glad to have a co-worker and a person ready to carry on some of her clinic duties in order that she may take up again the various other activities she is so well equipped to perform.

The public health nurse, because of your help, will have more time for her work in families, for the follow-up of tuberculosis and venereal disease cases and contacts, for maternity cases and infant welfare. She can do more effective school work and function as a true community person. Group teaching is increasingly recognized as an effective and efficient means of education for health promotion. The public health nurse will now be ready to assume her role in this important part of a public health program.

I have mentioned only a few ways in which the nurses among you will be helping in the public health program which is such a vital part of the war effort. Sanitarians, too, have

found the public health nurse a good ally in their work.

I understand that there are some follow-up workers in this group who will function in the venereal disease program. Although this is a comparatively new group in the public health family, I am confident that a satisfactory working relationship is being developed with the other public health personnel. Since the beginning of public health nursing an important part of our work has been in follow-up. She has during her preparation and experience developed certain skills in approaching people and in explaining and demonstrating. Her teaching has proved effective in the promotion of health. I am confident that the follow-up workers will find her an able and kindly advisor.

Summary:

While you are nearing the end of your orientation period you are actually on the threshold of a new and thrilling adventure. My very best wishes go with you. I am confident that you are going to do a good job as war emergency workers. I hope that you will find your work so interesting and worthwhile that you will want to find a way to qualify yourselves as permanent members of the public health profession. For the present you will have personal satisfaction in a job well done and in the knowledge that you are taking some part in the war effort as it relates to the home front. Success and contentment to you.

Malaria and War

By DON F. ASHTON, M. S., *Entomologist*
North Carolina State Board of Health
Raleigh, North Carolina

THOUGHTLESS people would not consider malaria an important war disease since it is seldom fatal. It is not always the enemy who strikes us down quickly who really does us the most harm, for we usually have

strength enough to come back and fight. The enemy we have learned to fear the most is the one who enters our ranks quietly, and then seeks to break down our resistance from within.

Malaria, though not a spectacular disease, has determined the fate of many a war and many a nation. Greece and Rome were mighty warring nations, and history tells us that their young men prided themselves on having strong and well-developed bodies. It is difficult to imagine such a people rising to such strength, and then within a very few years being easily beaten. It is easy to determine what happened to Greece and Rome. These countries were warring nations and conquered many lands at great distances from their native land. They also brought back with them thousands of slaves to work in the fields and as house servants. Many of the slaves came from Africa, a continent where malaria was rampant. Some of the slaves and many of the soldiers brought back this dreaded disease with them. These persons infected the mosquitoes abounding in the swamps of Greece and Italy and these insects in a very short time spread malaria over the entire countryside of these two nations. Thus malaria, a disease which breaks down a person's resistance, a disease which makes one sick and lazy, triumphed. Two great nations were beaten down. Malaria is still a great scourge in Greece and Italy and each year enormous sums of money are spent to combat it.

This country of ours has suffered with both war and malaria and malaria is still doing its best to be the conqueror. The early settlers and explorers introduced the disease into the new world where several native types of mosquitoes soon made it feel at home. During the Civil War large numbers of soldiers were rendered unfit for combat because of malaria. In the Spanish American War it is reported that more of our men died from mosquito-borne diseases than were killed by Spanish bullets. During the first World War our men suffered on battle fronts from malaria and many were rendered unfit for combat. Malaria was not only a menace to our troops in foreign fields, but also in our own country during that war. Large sums of money were spent in this country controlling malaria, and yet malaria was a dangerous menace.

Now we are engaged in another war—one

far more widespread than any of the previous ones. Malaria has struck us quickly in this conflict. Our troops defending Bataan in the Philippines soon ran short of medical supplies, among which was quinine, their only protection against the ravages of this disease. Many of our troops soon became so weakened by malaria that they were unfit for combat. Bataan was vanquished not so much by the Japanese but by malaria. Now our men are fighting in Africa, the so-called birthplace of malaria. What is it doing to our men there? The answer to this question lies hidden in the future.

What is this disease which so many of us take for granted here in the South? Why should it affect man as it does?

Malaria is caused by a parasite which attacks the red blood cells of the human body and destroys them. The red blood cells, as we all know, are those minute cells in our blood which carry oxygen to the different parts of the body. Normally, our body is constantly replacing these red cells, but when literally millions of them are destroyed each day by these malaria parasites, the organs of the body do not receive sufficient oxygen to maintain a normal production of energy. The organs without abundant oxygen supplies thus cannot function properly, much as a lamp light soon flickers and dies when air is included. When our organs do not function correctly the body as a whole soon shows this by its outward appearance or action. In the case of malaria our body being low in energy production soon causes one to become listless and without ambition.

This destructive parasite causing all this trouble is so small that two or more may attack a red blood cell, a cell itself so small that 5,000,000 are contained in a drop the size of a small pin head. To see the parasite we must observe it through a very high-powered microscope.

Now, knowing the cause of malaria, let us see how it is contracted. Malaria is classed with such diseases as influenza, measles, diphtheria and other like diseases, and the so-called epidemic diseases. Unlike these diseases

however, malaria is not contagious. That is, one person cannot get malaria by coming in contact with a person sick with malaria. The process of infection is much more complicated. Malaria may only be contracted in nature in one way. That is, through the bite of an infected malaria mosquito. We say "a" malaria mosquito because in North Carolina, of the forty-two different kinds of mosquitoes that have been found, only one of these is recognized as being able to transmit malaria. The malaria mosquito, *Anopheles quadrimaculatus*, "quad" for short, is like all other mosquitoes as far as its life history is concerned. There are four stages in its life history: the egg, larva or wiggler, pupa or tumbler, and adult or winged form. The first three stages can develop only in water and will die when water is not available. Of the two sexes of adults, only the female is able to pierce the skin of man or animal to get blood, the male only eats nectar from flowers.

The "quad" is a medium-sized brownish mosquito with four black spots on each wing. While at rest it seems to be standing on its head, the body held at a forty-five degree angle with the surface, and its long hind legs held above the back. For this mosquito to transmit malaria it is necessary that it become infected with the parasite. The female "quad" must "bite" a person with malaria first. While sucking the blood out of an infected person, naturally a few of the malaria parasites are also drawn into the mosquito's stomach. These parasites then develop for a certain period in the mosquito's stomach, following which they burrow through the stomach wall and get into the salivary glands. Therefore, when the "quad" feeds on someone else, these parasites flow out with the saliva, through the mosquito's bill and thus get into the blood of this person. The parasites immediately attack the red blood cells and begin developing and dividing, forming new parasites within the blood cell. The number of parasites within a cell soon increases to such an extent that the cell wall can no longer stay together and bursts. This releases hundreds of baby parasites, which immediately burrow into new

blood cells and make new homes. It is when huge numbers of red blood cells burst at the same time that the person has a chill. It has been said that one chill may mean that 150,000,000 red blood cells have been destroyed. As a result of the loss of red blood cells, the malaria victim becomes pale and tired, too weak to do a day's work.

After a chill is over, the person usually feels very hot. Sometimes the fever goes as high as 104 or 105 degrees. It is because of these symptoms—chills and then a fever—that malaria is commonly called "Chills and Fever". Anyone who has an attack of "Chills and Fever" should see his doctor right away. If treatment is begun immediately, it is likely that later chills may be prevented. Having early treatment by the doctor is the best way to get rid of the parasites in the blood and thus be cured of malaria.

When the cause and means of transmission of this disease were found over fifty years ago its control seemed easy. All that was needed was to prevent the malarial mosquitoes from biting people and the problem would be solved. Over fifty years have elapsed but these mosquitoes are still biting people and malaria is still one of the chief health menaces to mankind. The principal reason for this is that we do not, to a large degree, apply the knowledge that we have accumulated.

In North Carolina the mosquito which carries malaria breeds in lakes, fish ponds, fresh water marshes, and stagnant ditches. Most of the ponds producing large numbers of these mosquitoes are man made. Hydro-electric companies require large storage reservoirs to keep their generators going, while mill ponds, fish ponds, and recreation lakes are found all over the State. Natural ponds and marshes, both large and small, are menaces to the health in many communities, particularly in the eastern counties. In draining land for agricultural purposes little regard has been given in the past to the problem of malaria control. Most of the canals are constructed with wide, flat bottoms and irregular grades so that during periods of dry weather the flow stops and the canals be-

come ideal incubators for the "quad" mosquito.

The State Board of Health does not disapprove of pond construction. We realize their value in recreational areas and we know they are necessary in the creation of electric power; however, we do condemn the practice of maintaining a pond in such a way that it breeds millions of malaria mosquitoes which sap the life and energy of the surrounding community.

Malaria is, in general, a rural problem and affects the farmers of our State more than any other class of people. In the southern states alone, three million people had malaria in one year, and of this number it is reported that fifteen thousand died.

In times like these when we need a max-

imum crop production on every farm and when we need everyone strong and healthy, should we not bend every effort towards destroying this enemy we have in our midst. If each farmer and land owner will see that his ditches are properly cleaned so that they will not hold pockets of water, will clean out any pond which he has on his property, and will apply a suitable larvacide to any standing water on his property every ten days during the summer months, the malaria problem will be greatly reduced. If we do not continue to fight the "quad" and chills and fever with all known means at our disposal, malaria will continue to send us down in defeat.

Why Eat Greens?

By BLANCHE TANSIL, M. A.

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WHY eat greens? This is the question that many are asking as they choose the foods that will approximate the recommended daily allowances for the nutrients as set up by the National Research Council. There are as many reasons for eating greens as there are reasons for meeting the nutrition standards, for greens push up on the scale in every nutrient.

Greens top all foods as far as vitamin A is concerned. One serving, or one-half cup, of turnip greens will give us three times our requirement of this vitamin. Why then does such a large per cent of our population show evidences of a deficiency of this vitamin? There is one reason—greens are not included daily in the diet. Even one leaf of green escarole will protect us for a day as far as this vitamin is concerned. Every daily menu plan should include at least one leafy green vegetable, as turnip or mustard greens, collards or escarole.

Greens rate high as far as calcium is con-

cerned. One serving, or one-half cup, of turnip greens will give us one-fourth of our daily requirement. This is two-thirds as much calcium as a glass of milk will furnish. Weight for weight, turnip greens and loose leaf cabbage give us more calcium than any food except yellow cheese.

Greens are high in iron. Again, one serving, or one-half cup, of turnip greens will give us about one-fourth of our daily requirement of this mineral. With most of the foods shy in iron this is a valuable thing to know. By eating a green leafy vegetable daily, one can help to make up for the low iron content in other foods, and derive that strength and vigor so necessary today.

Greens are high in ascorbic acid, or vitamin C, the vitamin so easily lost in cooking. Enough of this vitamin may be found in one serving of turnip greens to protect us practically for a day. The method of cooking determines the actual amount retained, but one can be sure of meeting about one-fourth of

his daily need with a serving of turnip greens. If we drink the "pot likker," we can be sure that we are getting values in vitamin C equal to tomato juice.

Greens are a good source of riboflavin, or vitamin G. A serving of turnip greens will give us one-fourth of our daily requirement of this vitamin. Greens also contribute to the vitamin B₁, or thiamin values. This same size serving will meet one-tenth of our needs. (Eat soybeans to bolster up these vitamins!) When other vitamin values are recommended, we can be sure that turnip greens will contain a generous share of them. Greens also give us some protein, about one-twenty-fifth of our needs, but only one-hundredth of our calories! The low calories in turnip greens should be a happy thought today because one can eat and enjoy cornbread even more with his greens.

Greens are cheap! There is no food cheaper than greens. It is the whole plant that we eat. We do not have to wait for it to develop fruit or stalk or seed, so greens will always be cheap. A pound of greens will yield an average of four servings of one-half cup size each. If one has to buy greens, the average cost per serving is less than 2¢.

Greens are plentiful! There is never a shortage of greens. Greens know no season—every day of the year one can have greens growing. If the winter happens to be cold enough to kill some of them, there are others that survive. Collards seem to rise up in the barren

gardens as flags of health forever waving. And wild greens—land cress or "creases"—cover the tobacco fields in winter time, growing on the rich lands as God's gift to protect the family who forgot to make provision for meeting their food needs.

Greens are easily cooked! Pick them over and wash them in warm water to loosen the dirt; then rinse them thoroughly in cold water, cut the larger leaves, and cook rapidly in a small amount of water, for from ten to thirty minutes. Season any way that you like, but for turnip greens, use bacon fat or ham bone! You do not even have to cook some greens—just chop the freshly washed greens and toss them lightly with a simple sharp dressing and serve immediately, and your family will ask for more.

Greens are the diamonds of our diet. North Carolina is fabulously rich in this precious stone, and all her people should be healthy, wealthy, and wise because of it. Remember that if one serving, or one-half cup, will do so much for supplying the needed nutrients, then two servings will supply us with twice as much! Eat greens every day, and reap the rewards that only a rich, economical, and ever available food will give.

Note:

The food values used for the cooked turnip greens in this paper were taken from *Food Values in Shares and Weights*, by Clara Mac Taylor; 1942, The MacMillan Company.

Food for Victory

By WILLIAM H. RICHARDSON
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FOR many years, various agricultural agencies have been emphasizing the importance of the home garden. In the past, many farmers devoted themselves entirely to raising such staple crops as cotton and tobacco, but found it necessary to purchase all the food that went on their tables. This was

economically unsound, because it meant that if the cotton or the tobacco market collapsed, which frequently was the case, these farmers were without cash to purchase food for their families and often found themselves at the mercy of the time merchant.

The home garden movement, in its incip-

iciency, did not take nutrition into account, as it was purely economic. Many pretentious farms were without milch cows as well as home gardens. Our State Extension Service, through the various facilities at its command, did an excellent job toward educating farmers to the point where they recognized the necessity for home gardens and milch cows to supply the family table. Then nutrition entered into the picture. Long before the present war, county and home demonstration agents began emphasizing the nutritional value of the home garden. And so—when the present emergency arose, these extension agents were found to be valuable assets in helping to launch the State's present nutrition program. They came forward, unhesitatingly, with everything they had, and volunteered their services, which proved highly valuable.

We have reached another critical point in our food situation—where it is necessary not only for farmers but for those who live in towns and cities to help supply their own tables from land surrounding or adjacent to their homes. Many now are preparing to do this. The movement is no fad. It is a necessity, if our people are to be adequately supplied with a balanced diet. The entire nation has now switched over to the point ration system, which involves many of our most valuable foods. And so—the supplies on grocers' shelves, which must be parceled out so as to meet the minimum needs of the entire population, must be augmented; and they can be augmented through the victory garden.

If you desire authentic publications on home gardening, you may secure these by addressing a card or a letter to Mr. Frank H. Jeter, Agricultural Editor, State College; or if you wish first-hand information on some personal problem and will address the Extension Horticulturist, he will see that you are properly advised.

The purpose of this article is to emphasize the nutritional value of vegetables that can be raised in any back-yard. From Washington this week, the State Board of Health received a publication containing a very timely article on Victory Gardens by Victor R. Boswell, an

eminent horticulturist associated with the Agricultural Research Administration, in which he points out that:

There is now real need for civilians to relieve the burden on commercial food sources, transportation and preservation by growing all food that is practical at home and preserving, storing and using it over as much of the year as possible. Americans as a group have not been eating enough of those foods that are rich in minerals and vitamins necessary for growth and health. Surveys by nutrition experts and the large number of rejections under the Selective Service Act emphasize the need for improving our eating habits. Some people have not been eating sufficient quantities of vegetables rich in vitamins and minerals because they could not get them, but millions more have not eaten enough of these essential vegetables because of a lack of knowledge, indifference, or unfortunate food habits, even though they could easily afford and obtain them.

National Health, as well as personal well-being, demands that we learn more about what vegetables we need and make special efforts to use those vegetables effectively, Mr. Boswell goes on to point out, adding:

Nutrition experts advise people to get their vitamins from food rather than from indiscriminate use of synthetic preparations. Vegetables are important foods because of the minerals and vitamins they contain. Their greatest contribution is probably in Vitamin A and Vitamin C, but as a group they also furnish some Vitamin B₁, Vitamin G (riboflavin), calcium and iron. Even small amounts of these substances are important, because they supplement what is obtained from other kinds of foods. Vegetables differ greatly in their vitamin and mineral contents. Fortunately, however, some of the commonest and easiest to grow are the most valuable.

Most people in small towns and villages either have suitable garden spots of their own or can obtain the use of conveniently located small plots of reasonably good soil that are not too steep, too wet or too shady. Fresh vegetables out of one's own garden give

a particular satisfaction and pleasure. Wartime restrictions on travel and on the use of automobiles will keep people at home this summer and give them more time for gardening. Increased living costs undoubtedly will encourage the production of more food at home.

Primarily, one should grow those vegetables that will be most enjoyed. However, if a garden is to contribute to a better-fed nation, here are some vegetables that should not be overlooked and which can be raised in almost any North Carolina back-yard: Snap beans and lima beans, beets, cabbage, carrots, chard, collards, corn, kale, lettuce, onions, parsnips, potatoes, spinach, squash, sweet potatoes, Irish potatoes, tomatoes and turnip greens.

The green leafy vegetables—like chard, collards, kale and turnip greens—are of greatest importance, and one or another of them should be available from early spring to freezing weather. Yellow vegetables also are vital to good health. They should be in every garden and should be eaten frequently. Tomatoes and beans are so widely adapted, that they should be generally and generously grown. Tomatoes are so easily canned, that they should be grown for canning as well as for eating fresh.

Beets, carrots and onions can be stored for some time as well as used fresh; so quantities of these, sufficient to afford a supply long after harvest, may be planted. Parsnips and salsify can be left in the ground throughout the winter.

Cabbages also are easy to grow, but only a few plants per person are necessary, as they do not stand long after heading. However, any large surplus of cabbage can be made into sauerkraut, and the heads of the Danish type can be stored.

Sweet potatoes, Irish potatoes and corn are among the best energy foods. However, these do take up much room; therefore, they should be planted with a view to the amount of space available in the home garden. Where the space is not sufficient, other vegetables are preferable.

Here in brief is the Victory Garden program which aims at making good nutrition possible:

1. Every farm where climate and water supplies permit, should grow all the vegetables needed for the family's entire year's supply in fresh and processed form.

2. All town and suburban home owners who have sufficient open, sunny space and fertile ground should likewise produce as much as possible of the family's yearly vegetable supply, especially green and leafy vegetables, tomatoes, and yellow vegetables. The larger the home lot, the better for this purpose. Though every bit of vegetable produce grown at home will help, the earnest gardeners, especially those who tried their wings last year, will not be content with too small a plot.

3. In order to have larger garden plots than the home yard can provide, many Victory gardeners will seek garden space in a Victory community or allotment garden accessible by bus, street car, or bicycle, where on individual plots 30 by 50, or 50 by 100 feet or larger, they can grow more of the needed vegetables.

4. Community gardens likewise make it possible for many people living in densely populated metropolitan areas to have real gardens and to produce fairly large supplies of vegetables.

5. On farms and on many suburban home-steads people should plant strawberries, bush fruits, grapes, and certain tree fruits so that they may have more adequate supplies of these desirable foods.

6. In many town and rural schools, the school-garden effort should be directed specifically to growing large supplies of vegetables for school lunch purposes.

7. Not one bit of garden produce should be allowed to go to waste. All surplus from home gardens, or where available, local market surpluses of good quality vegetables and fruits, should be canned or preserved for use in homes, school lunches, or for welfare purposes.

More specific information about standards and recommendations for each type of garden is given in the full committee report sent to each State Extension Service.

Don't delay. Now is the time to do something about your victory garden—Action now will prevent regret at a later date.

Immunization Policy

Of The

State Board of Health for the Production of Active Immunization
By Means of Biological Products of Established Value

OPTIMAL Age for Immunization:

Smallpox—Smallpox vaccine should be administered when the infant is three months old. Reactions and complications are less frequent at this early age.

Whooping Cough—At the age of four months infants should be inoculated at weekly intervals with four doses of an improved whooping cough vaccine. Although children under six months of age do not produce immune substances as effectively as older children, the fact that a distressingly large number of children under six months of age die of Whooping Cough indicates that these younger children need protection.

Diphtheria—Children nine months old should be protected against diphtheria with two doses of Alum Precipitated Diphtheria Toxoid or three doses of Diphtheria Toxoid—Ramon, administered at intervals of four weeks to one month.

Typhoid Fever—At one year of age children should be given three doses of typhoid vaccine. This should be reinforced each year by an additional dose of typhoid vaccine.

If for any reason immunization procedures are not attempted at the optimal age, it is well to remember that it is usually better to be late than never.

Methods of reinforcing immunity will be outlined in connection with recommendations concerning the individual products.

Diphtheria Immunization Procedures Recommended:

1. Preferably at the age of nine months, certainly before children enter school, they should be protected against diphtheria by (a) two doses of diphtheria toxoid, alum precipitated, with a four-week or one-month interval between doses, or (b) three doses of diphtheria toxoid at four-week or one-month intervals.
2. In communities where it is impracticable

to give two doses of diphtheria toxoid, alum precipitated, or three doses of diphtheria toxoid (1a or 1b), to all children between nine months and six years of age, it will probably be found that the giving of one dose of diphtheria toxoid, alum precipitated, to a large number of children of this group is more effective in preventing diphtheria in the community than the use of the two or three doses (1a or 1b) for half as many children.

3. To those children receiving one injection of diphtheria toxoid, alum precipitated, a single reinforcing dose of not more than one half the usual dose of an equivalent diphtheria toxoid, alum precipitated, preparation should be given to each child inoculated in infancy, just prior to the child's entering school at five or six years of age, or three to five years after the initial inoculation if this has been carried out at some time later than the first year of life.

4. Routine Schick test six months after the completion of inoculation in infants is desirable in private practice and whenever the personnel and conditions of access to patients at public clinics make this additional contact practicable.

5. (a) Children of ten years of age or over who are known to be susceptible as the result of the Schick test should receive three doses of diphtheria toxoid at four-week or one-month intervals or equivalent doses of toxin-antitoxin similarly spaced. (b) For susceptible adults who may be exposed by occupation to contact with the clinical or carrier stage of diphtheria, the use of diphtheria toxoid, alum precipitated, is not recommended. In the case of adults with occupational hazards (e.g., physicians, nurses, attendants in hospitals for communicable diseases) we suggest:

(1) Schick Test.

(2) A Maloney test on Schick positive individuals; that is, an intracutaneous in-

jection of 1/10 cc of 1-100 dilution of Diphtheria Toxoid—Ramon. Maloney tests are read in the same manner as Schick Tests and tuberculin tests.

- (3) Give the Maloney negative and Maloney one plus reactors 2-1cc doses of Diphtheria Toxoid—Ramon, subcutaneously at intervals of one month.
- (4) Give Maloney two and three plus reactors 3—intracutaneous injections of 1/10 cc each of a 1-100 dilution of Diphtheria Toxoid—Ramon at intervals of one week.
- (5) Perform Schick test six months after the last inoculation.
- (6) If any of the Maloney two or three plus subjects remain Schick positive repeat the procedure outlined above.

The immunity produced by the administration of diphtheria toxoid is probably highest three or four months after the completion of the inoculations. It gradually decreases unless additional stimulation occurs.

Typhoid Immunization:

1. Initial administration of typhoid vaccine should be in three doses administered at intervals of one week.

2. Revaccination with a single dose of 0.1 cc of vaccine intracutaneously administered annually constitutes a reliable method of renewing immunity to typhoid fever, and should be the method of choice.

3. Revaccination each year with a single dose of 0.5 cc of vaccine subcutaneously administered also produces a satisfactory renewal of immunity to typhoid fever. This procedure should be considered as an alternate method when conditions preclude intracutaneous administration.

4. In order to maintain a high degree of immunity to typhoid fever, as indicated by humoral antibodies, revaccination at one-year periods appears to be an advisable procedure. Certainly, it appears that the interval between revaccination should not exceed two years. It may be added that revaccinations at the intervals recommended should not be discontinued because of age nor because of any number of previous revaccinations.

Whooping Cough Vaccine or Pertussis:

The experience with this vaccine has been limited to injections designed to prevent whooping cough. Inoculated children have been in the age group—six months to five years. There is no indication that the vaccine would be of therapeutic value. There is substantial statistical evidence that there is definite prophylactic value when used as recommended. It should be administered to children after they reach the age of four months; although it may be advisable to administer it to younger children, if whooping cough is prevalent in the neighborhood. It cannot be expected to protect children completely if it is administered after exposure. At least four injections at weekly intervals should be given. Children immunized against Whooping Cough at the age of two to four months should have an additional course of vaccine when they reach the age of nine months. It is desirable that all children receiving Whooping Cough Vaccine during the first year of life have at least one stimulating dose of the vaccine administered each year until they reach the age of six years.

Smallpox—Smallpox vaccine should be administered during infancy and again just before the child enters school and again at the age of twelve years. If a person is immune to smallpox, the administration of smallpox vaccine will not result in a primary take and no particular inconvenience will be caused. A successful take is proof that the person needed protection. Smallpox vaccine should be administered immediately to all persons exposed to smallpox or when smallpox is prevalent in a community.

1882 Koch discovered the tubercle bacillus.

1882 Koch and Ogston discovered the streptococcus.

1883 Koch discovered the organisms of cholera.

1883 Kelbs saw the diphtheria bacillus.

1884 Gaffky obtained pure cultures of the typhoid bacillus.

1884 Nicolaier discovered the tetanus bacillus.

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BETH COOPER KREBS AND HER MOTHER, MRS. A. S. KREBS

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters).	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months;
The Expectant Mother.	19 months to 2 years.
Breast Feeding	Diet List: 9 to 12 months; 12 to 15 months;
Infant Care. The Prevention of Infantile Diarrhea.	15 to 24 months; 2 to 3 years; 3 to 6 years.
Table of Heights and Weights.	Instruction for North Carolina Midwives.

CONTENTS

	Page
Notes and Comment	3
Childhood Allergy	7
They Need Not Die	10
Summer Diarrheas	12
Free Medical and Hospital Service Provided for Wives and Babies of Certain Classes of Service Men	13
Infant and Maternal Mortality for the United States (Table)	15
Infant and Maternal Mortality for North Carolina (Table)	16

Notes and Comment

By THE ACTING EDITOR

NEW LIFE WHEN a child is born the parents at least begin to think about what the world has in store for that little one. Will this child be treated kindly and gently or will life be a stern taskmaster? What opportunities and what responsibilities will be presented to this future citizen? Can life be preserved and health protected? Can training and guidance be provided so that this young life be directed into the ways in which he or she should go? These are thoughts which should be in the minds of all those who have the responsibility for bringing a new life into the world.

Responsibility for children is not properly limited to the parents. We are supposed to be living in a civilized community where the law of the jungle is not necessary in the law of the land. In our method of life each individual has a definite and an important place in the intricate machine which is our social order. The community has a definite responsibility to each person comprising it. The protection of health and life is now recognized to be just as important as education and training. It has taken a long time for us to realize that the protection of the individual is just as important as preservation of property rights. In this land of ours we ponder the effect of the world upon the individual as well as the effect of the individual upon the world.

In youth life seems endless. Plans and hopes for the future seem to be such durable structures. Age may bring disillusionment—may that disillusionment be only partial, however,

and permit sufficient fabric and substance to remain of the enthusiasm and ambition in the young parents of today that they may face the future with courage and a determination to make this world a better place in which to live.

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DR. CARSON With this issue of the Bulletin we are introducing a new voice in the field of public health. Several months ago Dr. Carson became an assistant to Dr. G. M. Cooper in the Division of Preventive Medicine. Well trained in medicine and in pediatrics, Dr. Carson presents two papers dealing with diseases of children. His paper on "Childhood Allergy" presents a subject which has been much neglected as a public health problem. His paper on "Summer Diarrheas" calls the attention of our readers again to this most important condition. Although far too many of our children die from diarrheal diseases in this year of grace, Dr. Carson's paper does give a definite sense of satisfaction to some of the old timers. This problem was discussed extensively at the 1926 meeting of the North Carolina Public Health Association. At that time attention was called to the facts that in 1924 we had 1,735 deaths from diarrhea and enteritis and that 1,484 of these deaths were in children under two years of age. This condition was responsible for 1,308 deaths in children under two years of age in 1925. True, progress has been made when there is a reduction of deaths due to one particular cause from approximately 1,400

to less than 500 in face of the fact that we now have more children under two years of age than we had 18 years ago. Although progress is encouraging, we cannot be complacent in the face of 464 preventable deaths. We must continue our efforts and even increase them, if we are to save lives that very much deserve to be saved.

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DR. WARD A competent pediatrician who is so public health minded that he is willing to serve as a member of the State Board of Health and contribute his time, thought and energy in the development of an effective public health program, has in his article "They Need Not Die" lifted his voice to save human life. This paper, Dr. Ward presented over Radio Station WIZE of Asheville, as part of an educational program sponsored by the Buncombe County Medical Society. When a group of physicians in the busy routine of their daily practice take time to prepare and present timely papers on subjects which will contribute to public well being, we have ample evidence of the high ideals of the medical profession.

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ATTENTION: PUBLIC HEALTH NURSES We would like to urge each and every one of you to read and heed the following announcement:

"Public health nursing is a vital part of national defense. As Public Health Nurses we always need the leadership which our professional organization alone can give.

I wonder if the matter of joining your National Organization for Public Health Nursing this year has just slipped your attention. When you join will you also subscribe to the magazine which is invaluable to a public health nurse?

I hope all of our departments will be listed in this magazine as one hundred per cent in the near future.

Mabel Ann Patton
State Membership Representative
National Organization for Public
Health Nursing"

Never before have we so needed strong, vigorous public health organizations with intelligent, energetic leaders. The nature of our future depends largely upon what we do today. If you are a public health nurse, your national organization needs you and you need your national organization.

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MOUTH HEALTH In the February, 1943 issue of the Health Bulletin we carried an announcement concerning a new publication of the Division of Oral Hygiene—"Mouth Health Catechism." Since then the requests for this publication have been pouring in. This attractive booklet contains nine illustrations and forty questions and answers printed in two colors. It should be most helpful to parents who wish to give their children the heritage of sound healthy teeth. Many parents who cannot expect to give their children wealth in the form of stocks, bonds, real estate or bank accounts, can give them something of equal value in the form of health. "Mouth Health Catechism" will be helpful to these parents. This free pamphlet may be secured by addressing the request to The Division of Oral Hygiene, State Board of Health, Raleigh, North Carolina.

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NEWS RELEASE New York, N. Y.—Rheumatic fever, one of the major enemies of child health in America today, and a leading cause of heart disease, may become an even greater menace as conditions favoring its spread now exist in many boom towns throughout the nation. This warning, which is stressed in a statement by Dr. Donald B. Armstrong, Third Vice-President of the Metropolitan Life Insurance Company, is based upon studies showing that overcrowding, makeshift housing facilities, and unhygienic surroundings may act as detonators to set off explosive outbreaks of the disease. "Now is the time to sound this warning," he said, "as more cases of rheumatic fever occur during the damp, chilly days of late winter and early spring than at any other time of the year."

In North Carolina, Statisticians of the Company pointed out, the mortality rates of rheu-

matic fever are somewhat lower than the average for the country as a whole. "However, the importance of the disease and its crippling heart complications are shown by the fact that among children between ages 5 and 14 in North Carolina, rheumatic fever and rheumatic heart disease cause more deaths than any other disease except pneumonia. The importance of rheumatic fever is further indicated by the fact that infantile paralysis, generally regarded as one of childhood's greatest menaces has, in recent years, caused only about one-tenth as many fatalities among North Carolina's children in this age group."

"The urgent need for protecting all segments of the population from sickness has been stressed repeatedly by health and medical authorities and government officials concerned with the conservation of manpower," continued Dr. Armstrong. To safeguard the health of children and to help prevent untimely death from rheumatic heart disease the Metropolitan, in cooperation with leading physicians and the American Heart Association, The American Academy of Pediatrics, and the Federal Children's Bureau, is conducting a nation-wide educational campaign to reduce the mortality from this disease.

Health authorities point out that although the cause of rheumatic fever has not been discovered, it is known that this illness tends to run in certain families. An attack of the disease is often preceded by a cold, sore throat, or tonsillitis caused by germs of the streptococcus family. It appears to be more prevalent in the North Temperate Zone and is apparently less frequent in rural areas than in cities.

"Success in fighting rheumatic fever depends upon early discovery and adequate medical supervision, even after recovery from an attack," Dr. Armstrong asserted. "Many children have repeated attacks until they reach adolescence. The likelihood of heart damage is increased by the frequency of attacks. Consequently every effort should be made to determine if heart disease is present. This is not always easy and when doubt exists the family physician frequently seeks the aid of experts in diagnosis."

"While the family physician occupies the key position in the attack on rheumatic fever, he needs the cooperation of the family and, following recovery, that of teachers and others who have daily supervision of the child in order to prevent, as far as possible, subsequent recurrences. To be most helpful, parents and others need to know the essential facts about the disease which are set forth in special literature now being widely distributed."

"A rheumatic child, if he has the benefit of early diagnosis and treatment, may be guided through the critical years of childhood with the expectation that he will stand a good chance of escaping heart damage. Even though the heart may be damaged, most children when completely recovered from the active phase of rheumatic fever, need not be restricted, as a rule, from ordinary activities. Many children have been needlessly made invalids because this has not been fully appreciated. Suitable educational and vocational guidance will assist children with severe heart damage to lead useful and relatively normal lives."

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WIVES OF SERVICE MEN

In this issue of the Bulletin we carry an announcement of the revised plan for providing obstetrical care for the wives of certain classes of men who are in the military service and for giving medical care to their young children. Our readers will be rendering a real service to those who need help, if they will pass this information along to their friends or acquaintances who are entitled to this assistance.

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INFANT AND MATERNAL MORTALITY

On pages 15 and 16 of this issue you will find the latest statistical data available on Infant Mortality and Maternal Mortality. On page 15 this data is presented for the United States and state by state for the year 1941. On page 16 comparable data is given for North Carolina and each of its counties for the year 1942. It is, of course, disconcerting to find that North Carolina's rates, both for Infant Mortality and Maternal Mortality, are higher than those for

the nation and that only a small number of states have higher rates than we do. Yet if we look backward we find that we have made marked progress. In 1932 the Bureau of Vital Statistics of the State Board of Health undertook a five-year study of Maternal Mortality in North Carolina. We find the following:

	No. Deaths	No. Births	Rate
1932	555	77,880	7.1
1933	535	75,322	7.1
1934	605	79,556	7.6
1935	554	79,596	7.0
*1936	497	76,869	6.5
	2,746	389,223	7.1

In 1942 with 91,056 births we had only 314 maternal deaths, a rate of 3.4, less than half of that for the five year period—1932-1936. If other states had not improved their rates in the meantime, our relative position among the states would be much better. With the facilities which we have been using since 1935 under the able leadership of Dr. G. M. Cooper, we can expect to save additional lives as the years go on and further increase the protection of those who are bringing new life into the world.

DR. HOLMES When the name, Oliver Wendell Holmes, appears in print many people will think of Justice Holmes; others will think of Holmes, the poet and writer of excellent prose. Yet the world in all probability owes a much greater debt to Oliver Wendell Holmes, reformer of medical education, than it does to Holmes, the father of a distinguished jurist or to Holmes, the author of *Old Ironsides*; *The Chambered Nautilus*; *The Last Leaf*; *The Autocrat at the Breakfast Table*; or co-founder of *the Atlantic Monthly*.

Born in 1809, son of a Calvinist minister, after receiving a classical education, Holmes entered Law School but gave up that for medicine. After studying first in Boston and later in Europe, he started practice in Boston and became professor of Anatomy at Dartmouth College in 1838 and held the position

*Provisional.

until 1840. When only 21 years of age Holmes wrote *Old Ironsides* which nearly every school child remembers started with "Ay, tear her tattered ensign down!" The occasion for writing and the result of this poem is known to nearly everyone. In 1838, partly as a protest against the short course of study and inadequate instruction offered at Harvard Medical School, Dr. David Humphreys Storer organized Tremont Medical School in Boston and recruited Oliver Wendell Holmes in 1840 as one of the members of the faculty. This probably began Holmes' career as a medical reformer. It was in 1843, just 100 years ago, when Dr. Holmes was thirty-three years of age that he made his outstanding contribution to medical literature when he presented his essay on the "Contagiousness of Puerperal Fever." As an example of English literature, this paper is a classic among controversial essays and is worthy of note from that point alone. By far the most important fact in its appraisal, however, is that it has exerted an influence through the years on the practice of obstetrics and has unquestionably contributed to the saving of thousands upon thousands of lives. It should be remembered that this paper was written in 1843 and that it was not until 1867 that Lister presented his paper on the "Antiseptic Principle of the Practice of Surgery," that it was not until 1878 that Pasteur presented his—"The Germ Theory and Its Applications to Medicine and Surgery."

Without any modern conception of infections Dr. Holmes relied upon careful observation, thorough inquiry into available literature, critical appraisal of evidence, accurate analysis of facts and the facilities of a keen, inquiring mind. He presented a long catalogue of melancholy histories to establish the fact that Puerperal Fever was a contagion which could be transmitted from one patient to another by midwives. Although he was not the only observer of the times who held to this point of view, and represented a definite minority of the medical thinkers of that time, he raised his voice louder and more certainly than any one else. For at least ten years following the presentation of this paper it was an extremely

controversial subject. Dr. Meigs of Philadelphia, author in 1842 of the "Philadelphia Practice of Midwifery" was perhaps the most important of Dr. Holmes' critics. In referring to the deaths from Puerperal Fever Dr. Meigs states: "I prefer to attribute them to accident and to Providence of which I can form a clear conception rather than to contagion of which I cannot form any clear idea." Perhaps the most quoted sentence which Holmes used in this controversy was—"The pestilence carrier of the lying-in chamber must look to God for pardon, for man will never forgive him." It has taken almost a hundred years for us to apply effectively the lesson which Holmes taught us in 1843.

In 1847 Dr. Holmes was appointed professor of Anatomy and Physiology in the Harvard

Medical School. He also gave instruction in kindred departments to the extent that it was said of him that he occupied "not a chair but a settee in the school." He continued as a lecturer in anatomy until 1882. Like many reformers he became something of a conservative in his later years and was not exactly enthusiastic about the reforms instituted by Chas. W. Elliott in the 1870's. In 1843, 16 out of 100 women delivered in the maternity hospital in Vienna died. In 1941 only one out of 1300 mothers in the United States died of Puerperal Infection. Of course, Dr. Holmes cannot be credited with all of this accomplishment but there is no question but what he contributed much to its attainment. Few physicians are as well entitled as he to a place in the Hall of Fame.

Childhood Allergy

By MERL J. CARSON, M. D.

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Raleigh, North Carolina

THERE is no need for parents to throw up their hands and admit failure because their child has asthma, eczema, etc. These individuals who are commonly termed "allergic," may exhibit many varying symptoms of allergy. In addition to asthma and eczema, he may break out with the "hives" every time he eats a particular food, or he may have abdominal pains, vomiting or diarrhea. He may have hay fever, persistent running nose, etc. This rather unfortunate group of people makes up a rather large percentage of the population—reliable estimates placing this as high as one person out of every ten, or 10% of the population. With such a high percentage as this, it would seem worthwhile to find out if there is not some way in which the various manifestations of allergy may be helped.

Parents who have some allergic condition are much more likely to have children who show allergic manifestations. The child may

not necessarily have the same manifestation as the parent, however; as for instance, the parent may have asthma and the child eczema. From this it is clear that what the child inherits is a tendency to become allergic.

Probably the most common manifestation of allergy seen in children are:

1. Atopic eczema
2. Hay fever
3. Bronchial asthma
4. Vasomotor rhinitis.

More rarely one finds other manifestations as:

1. Urticaria
2. Contact dermatitis
3. Gastro-intestinal allergy.

Due to lack of space, only the more common manifestations will be considered in detail.

1. **Atopic eczema.** This is a not infrequent condition often called infantile eczema or merely, eczema. It is usually found in a child,

one or both of whose parents have some allergic condition, as: hay fever, asthma, eczema, etc. It may first appear at the age of a few weeks or may not become evident for several months. The child may be either on breast or artificial feedings. The first appearance is usually on the baby's cheeks, which become reddened and rough. The roughness and redness increases; there is marked itching so that the baby rubs his face against the bedclothes, arms, hands, etc. This makes the condition worse so that the skin actually becomes raw, oozing, and may even bleed. Naturally these raw places become infected and thick scales and crusts are formed. Unfortunately the skin eruption is not confined to the face. It may spread to the scalp, down onto the neck, body, arms and legs. These advanced cases present a very pitiful picture of abject misery, constantly rubbing or scratching themselves, whimpering and crying. As a usual thing these children are very well developed, fat, well nourished, and seem to be perfectly well except for the skin eruption.

The usual cause of this condition is some food which is eaten by the child, the most common offenders being wheat, milk, and eggs. In the babies who are fed on breast milk, the offending proteins are often eaten by the mother, and passed on to the baby through the breast milk. Babies fed on artificial formulae, usually react to the cow's milk; to the wheat found in their cereal, or to egg proteins which are fed to complement the milk. Other causes may sometimes be found as various vegetables, fruits, etc. Sometimes objects coming in contact with the skin will produce this, as wool, flannel, etc. More rarely sensitization to certain pollens of weeds, grasses, trees, or to dust, etc., will cause the eczema, or will aggravate it.

Treatment of this condition is very often prolonged and discouraging. It is obvious that removal of offending agent (as the wheat, egg, milk, etc., protein) will allow the skin to clear. However, it is often very difficult to blame any one particular factor. In the breast fed baby, one is sometimes able to help by removing certain articles from the diet of the mother. One should endeavor to keep the

baby at the breast if possible, but if the eczema persists and is quite bad, weaning should be considered. When whole cow's milk is causing the trouble, evaporated or dried milk may be tried. If these do not help, one might go further and try various other milks as Goat's milk, Hypo-allergic milk, etc. In cases where wheat, egg, or vegetables are responsible, elimination of these articles will be of benefit. In addition to these basic procedures, local application of various coal tar creams to the skin are generally helpful. The baby should be prevented from rubbing or scratching the skin, and wool or flannel garments should be kept from contact with the skin.

It should be kept in mind that frequently the condition is very resistant to treatment and may require a good deal of both time and patience. Many of these cases, however, will clear up by themselves after the child has reached the age of two years.

2. **Hay Fever.** This is a condition which has a seasonal variation. It is not usually found in the very young infants but becomes increasingly more frequent as the child becomes older, and is often referred to by a variety of names as: "Rose cold," "June cold," "ragweed fever," etc. It is caused by exposure to a specific pollen, to which the person is specifically sensitive. For this reason attacks of hay fever are seen to come on acutely at particular seasons of the year, depending on the time at which the various grasses, trees, etc., pollinate. The most common pollens which cause this vary in their times of appearance in various parts of the United States. In general, however, they are found in three groups:

a. Spring—Pollens of trees extending from the middle of March to the early part of June.

b. Early summer group—Pollens of grasses extending from the early part of May to the end of July.

c. Early fall group—Pollens of weeds extending from the middle of August to the last of September (or until the first frost).

The most important pollens in each group which are found in North Carolina are:

a. Spring group—Elm, hazelnut, maple,

poplar, birch, oak, willows, ash, hickory, beech, sycamore and bluegrass.

b. Early summer group—Docks, broom grass, Johnson grass, orchard grass, English plantain, rye grass, bermuda grass, pigweed, timothy, lamb's quarters, red top, crab grass, and common plantain.

c. Early fall group—Southern ragweed, marsh elder, giant ragweed, short ragweed, annual sage, and cocklebur.

It is therefore relatively easy for a person who has hay fever at one of these seasons, to narrow the search for the offending pollen considerably, by going through some such list.

The picture of acute hay fever is unmistakable. There is marked itching and watering of the eyes, sneezing, running and blocking of the nose. The eyes also appear red and swollen. Itching of the roof of the mouth or throat may provoke coughing. Headache may occur due to blockage and improper drainage of the sinuses. The attacks may come on very suddenly but if the person succeeds in getting away from the offending pollen, may subside quickly.

Many different kinds of treatment have been used. Several different filter mechanisms have been devised to fit into the nostrils in order to strain the pollen out of the air before it comes in contact with the mucous membrane of the nose and throat. These are only partially successful. Special air conditioned and air filtered rooms may prove satisfactory as bedrooms, etc., but of course do not help when the patient has to leave this room. Probably the most successful treatment is desensitization. In this type of treatment, the offending pollen is first definitely established by means of diagnostic skin tests, etc. Then an extract of this pollen is made and given to the patient by injections. Many of the patients will be helped markedly by this proceeding and it is very well worth trying.

3. **Bronchial asthma.** Unfortunately this condition is so frequent that probably most persons are familiar with the distressing picture of a person suffering with an acute attack. The onset is frequently sudden and acute, and may begin with symptoms like hay fever, followed

by development of a cough, and wheezing respiration. There may be accompanying "hives" or swelling of the lips or tongue. Often the attack comes on suddenly waking the patient from sleep. In the severe cases, the respirations are slow and labored, with a wheezing noise as the breath is being let out. The patient may have to sit up in a chair to become more comfortable, and may actually become blue. Perspiration stands out in beads on the cold bluish skin, and speech becomes impossible. Usually the attack lessens in a short time and the breathing is easier, cough and expectoration are lessened and the patient may be able to relax and go back to sleep.

Asthma may be seen in children of any age, with about one third of the patients having the beginning of their symptoms during the first ten years of life. The inherited allergic tendency is very important in the causation. Infections of the respiratory tract are very likely to start an attack. The specific factors which actually produce the attacks are the things to which the person is sensitive. One of the most important groups are things which are inhaled as: dust, pollens, feathers, animal danders, orris root (in certain powders), tobacco, etc. The other large group consist of substances which are eaten as: egg, wheat, milk, chocolate, etc. In addition, there are other less important groups of substances which need not be listed now.

In order to find the thing which is causing the attacks, a careful history of the attacks may give leads; as when attacks follow horse-back riding, or eating eggs, etc. However, usually this is not so definite and tests have to be carried out on the skin to show the sensitivity. These are known as "skin tests." If well done they often will reveal the offending material and if possible, merely keeping away from this will cause the attack to stop. Often this is not practical so extracts of this material may be given by injections in an effort to desensitize the person to this particular material. This is very frequently of marked benefit and should be tried when needed.

4. **Allergic rhinitis.** This condition has become more widely recognized during the past

few years and is often seen occurring in children as a forerunner of asthma. The importance lies in the fact that if the rhinitis is recognized and treated early, this may prevent the development of asthma.

The most important characteristic is the paroxysmal nature of the attacks. They usually come on suddenly with marked sneezing, profuse watery nasal discharge, and obstruction of the nose. Itching and watering of the eyes may occur but usually does not. These attacks may come on at particular times of the day or night and may last for a few minutes or hours. The attacks occur at all seasons of the year, thus differing sharply from the seasonal incidence of hay fever. Often it is extremely difficult to differentiate the attacks from a common cold, so that frequently parents will complain that their child has a "cold" continuously when he in reality is suffering from allergic rhinitis.

The exciting factors are similar to those of

asthma. The inhalents are most important, of which dust, orris root (in some face powders), feathers (or animal danders) and tobacco, are the most frequent offenders. The materials taken in by mouth are of secondary importance and in this group one finds offenders as: wheat, buckwheat, eggs, etc.

Treatment is quite important as by this, later allergic manifestations, as asthma, may be prevented. The specific offending material must be determined either by history of the attacks or by various skin tests. When this has been done, one should, if possible, eliminate all contact with this material as: removal of feather pillows; use of a face powder which does not contain orris root, etc. If it is not possible to remove this material entirely, extracts may be prepared and the patient desensitized by a series of injections. If this treatment is satisfactorily carried out, many of these patients will be markedly relieved or cured.

They Need Not Die*

By JOHN LABRUCE WARD, M. D.
Asheville, North Carolina

MY remarks are directed to the parents of young children in the hope and in the firm conviction that if the advice is acted upon in the future—as it has not always been acted upon in the past—much needless anxiety and sorrow will be prevented. Sometimes sickness and death are unavoidable. This is regrettable but does not cause remorse. Only too often infants and young children die of diseases which could have been and SHOULD have been prevented. Such cases are due to procrastination, indifference, neglect or ignorance. None of these excuses a person before the law and yet, because of these, children are permitted to die and nothing is done about it.

When a physician puts down, "diphtheria" as the cause of death, he is not telling the whole truth. If he did, under contributory causes of death, would appear the word "neg-

lect." Some years since, in this city, we were called to see a boy dying of diphtheria. He had had no medical attention. The parents were educated. About the same time, in this county, parents severely injured a baby by striking him. These parents were uneducated. They were convicted and, very properly, sentenced to prison, for injuring their baby who, fortunately, recovered. What was done to the parents whose child died of neglect? NOTHING.

During the past year there occurred in this city over 1100 cases of measles. Another epidemic is now beginning. This is considered a harmless disease yet, because of complications, it kills more children every year than does diphtheria. This is particularly true in

*A Broadcast over Radio Station WIZE, Asheville, N. C. by courtesy of Broadcasting Station.

the case of infants and young children and, contrary to popular belief, the younger the child, the greater the danger. What can be done about it? In the first place, when your child has a slight cold or red eyes, don't let him go to school. These are the first signs of measles. Don't expose other children. Do as you would be done by. Put your child to bed at once and call your doctor. By so doing, you will protect your child as well as other children. For quite a number of years, immune globulin or serum has been used successfully to protect children against measles but this immunity or protection is not long-lasting as in the case of diphtheria when toxoid is used. It confers what is known as passive immunity. If your child has been exposed to measles consult your physician at once and let him decide when and how much globulin to administer. In the case of infants or delicate children a sufficient quantity is given to prevent the disease whereas, in the case of older healthy children, only a sufficient amount is used to modify the disease so that complications are unlikely. Thus we can have a mild case which will usually afford immunity for life.

Diphtheria should never occur because we have not only the means of producing an active immunity against it but we have a test whereby we can determine with a great degree of accuracy, how long this protection lasts. It is the custom to give—when the infant is about six months of age—two injections of toxoid at monthly intervals. It has been definitely established that one injection is not sufficient. Six months after the second injection, a Schick test is made to determine whether the infant has the desired immunity. About 5% will not be immunized and these should be given one or two more injections. Does this immunity last for life? No. The child should have a Schick test made every two years for a number of years. Even children who have had the disease should be immunized because an attack of diphtheria does not confer a lasting immunity as does an attack of measles. Despite the fact that there is a law in North Carolina requiring infants to be immunized against diphtheria, there occurred 33 cases in this city and

24 cases in this county last year. There are some cities in this country where not a single case of the disease has occurred in several years. The people in those cities are intelligent and intend to save the lives of their children when possible. To those parents who have not complied with the law, I am authorized to say that our health officers, Drs. Lord and Sisk will soon be compelled to invoke the law in order to force them to protect their children.

Whooping cough is another disease which is not regarded as serious, yet which slays its thousands every year. Often a physician is called only when the little patient is beyond help. But when the grim reaper has visited the home, the grief of the family is just as great as though the child had died of plague. There still are some garrulous grannies and knowing neighbors who advise parents to expose children to whooping cough so that they will "have it early and get over it." If exposed, most of them will "have it early" but some of them will NOT "get over it." Such advisers by some oversight were not included in the list of persons who are said to be an abomination before the Lord!

None of these inoculations here suggested is harmful. There may be some local pain for a day or so and, perhaps, a slight elevation of temperature. Can an infant be protected against whooping cough? Yes, in the large majority of cases. Three or four injections of vaccine are given at 3-week intervals. Then one injection should be given each year or so until the child is six or seven years of age. After this age complications are rare. One attack of the disease usually confers lasting immunity. So, let us repeat, **THEY NEED NOT DIE.**

"She, who her lovely offspring eyes
With tender hopes and fears,
O bless her with a mother's joys,
But spare a mother's tears."

1887 Weichselbaum described the meningococcus.

1889 Kitasato obtained the tetanus bacillus in pure culture.

1892 Welch and Nuttall described the gas bacillus.

Summer Diarrheas

By MERL J. CARSON, M. D.

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FOR many years summer diarrhea and dysentery have been one of the leading causes of infant mortality in North Carolina. In former years, these were much more fearful and dreaded conditions than at present, and it was literally true that during the hot summer months, babies died like flies. During the past five years the mortality has steadily decreased. However, even with this decrease, in 1942 approximately 464 children under 2 years of age died as a result of these conditions. This, of course, does not include the numbers of children over 2 years of age who died nor does it indicate the tremendous number of children who were ill but recovered.

The hot summer months are now beginning and like train bearers in their wake come flies, contamination of milk and food, diarrhea and dysentery, sickness and death.

What causes the summer diarrhea? Some of the causes are due to an infection of the intestinal tract by specific bacteria such as the typhoid or dysentery bacteria. The greater number, however, are due to digestive disturbances, for which no specific bacteria can be blamed. These latter cases are the ones where most can be done by the mother toward preventing the illness.

Hot weather in itself has an effect of decreasing the amount of digestive juices secreted by the stomach and intestines. This causes a decrease in the acid content of the stomach so that bacteria can grow and multiply here, and also leaves undigested food in the intestines which encourages the growth of harmful bacteria. These same effects are realized if the child has an infection anywhere in the body, such as an ear infection, pneumonia, etc.

Food which the child takes is very often responsible. This is particularly true where the child is being fed on an artificial formula from a bottle. Refrigeration is very frequently

a serious difficulty in the rural areas. Ice cannot be delivered to the scattered homes and electric refrigerators are too expensive to be had, even in the relatively few homes where electricity is available. It is very easy to see that if the baby's milk is made up in advance, and remains in the heat, the bacteria which are present in the milk will multiply by the millions very rapidly, and spoil the milk. Then when the baby drinks this milk, he usually becomes sick.

It is not necessary to go into the details of the symptoms these babies present when ill. Anyone who has ever seen the pathetic picture they represent can never forget it. The sunken eyes, ringed with dark circles, the dry and wrinkled skin, the weak, small, pitiable cry, the listlessness and apathy, the deep, pulseless breathing, the vomiting and watery, greenish or bloody diarrhea. These are unfortunately far too frequent a sight.

What can we do to prevent this situation? Difficult as it is in normal times, the problem is increased manyfold by the exigencies of war. The transportation difficulties are increasing, doctors are scarce and overburdened, and hospitals are so overcrowded that often patients have to be turned away. It is becoming more apparent that the mother is having to accept more responsibility for prevention of disease and maintenance of good health in her children.

In order to help prevent this summer diarrhea, a number of simple procedures may be followed. In the first place, there should be more babies raised by breast feeding. Every effort should be made by the mother to achieve this end. She should drink plenty of liquids, get adequate rest and food, and nurse her baby regularly. This will eliminate the tremendous hazard of spoiled milk and eliminate in large degree the need for refrigeration.

If it is impossible to continue with breast feedings, an artificial formula made from evaporated milk or one of the dried milks is usually highly satisfactory. They have the advantage that they are sterile in the can, and individual feedings may be made up just before feeding time, thus eliminating the refrigeration need.

If fresh milk is to be used, be sure to use only Grade A Pasteurized milk. Do not use raw milk if it can possibly be avoided, but if it must be used, be sure to boil it for three to five minutes before using and keep it stored on ice. A safe plan is to boil all fresh milk for three to five minutes before using it for the baby, whether it is pasteurized or raw.

Cultured lactic acid milk is very satisfactory usually and has the advantage that it usually contains fewer harmful bacteria than sweet milk. Lactic acid may be obtained from a drug store and used in evaporated milk or dried milk formulae if desired, or may also be used in fresh sweet milk. This is usually used in the proportion of one teaspoonful of lactic acid to one quart of milk. This milk has to be prepared in a certain way however, in order to obtain the best results. Full directions should be obtained from your physician or the local Health Department.

General hygienic measures are very valuable. Be sure not to force feedings on babies when they don't want them, especially during the hot weather. Give plenty of water and fruit juices at all times. With the hot weather, the baby needs an increased amount of liquid to maintain his normal body functions. Scrupulous cleanliness is necessary when making up formulae or other feedings. All water should be boiled before using and flies and insects kept away from the baby, his food, nipples, etc. Typhoid vaccine should be given when the baby is approximately one year old, and this will help prevent one group of the diarrheas. Overdressing during the hot weather increases the body heat of the baby and may lead to digestive disorders. Frequent sponge baths are very helpful during the very hot weather, and should be more widely used. These will also tend to help eliminate "heat rash."

In conclusion, it should be emphasized that if the baby should have diarrhea, be sure to give him water and fruit juices in abundance and discontinue his other foods temporarily. As these children often become desperately ill in a very short time do not delay too long before seeing your doctor.

Free Medical and Hospital Service Provided for Wives and Babies of Certain Classes of Service Men

By MERL J. CARSON, M. D.
Division of Preventive Medicine
North Carolina State Board of Health
Raleigh, North Carolina

ON March 18, 1943, the Congress of the United States appropriated money to the Children's Bureau for allotment to the individual states, whereby free maternity and pediatric care may be provided to the wives and babies (under one year of age) of enlisted men in the armed forces of the United States, who are

in the 4th, 5th, 6th or 7th grades.* These funds are to be administered by the Maternal and Child Health Division of the State Board of Health, under direction of G. M. Cooper, M. D.

*This excludes the families of commissioned officers; of master, major, first, technical, staff, and platoon sergeants; and of chief, first and second-class petty officers.

Maternity Care: To obtain this service, any woman whose husband is in the armed forces in grades 4th, 5th, 6th or 7th is eligible and should apply just as soon as they know of the pregnancy, if she desires this free medical and hospital service. Authorization papers may be obtained at all local health departments, Red Cross Chapters, etc. The woman has a free choice of physician, if that physician wishes to participate in this program. The husband's **serial number** must appear on all authorizations. These blanks are to be filled in in part by the patient and in part by the physician. Then they should be sent to the local health officer or part time county physician, who will sign them and forward them to G. M. Cooper, M. D., State Board of Health, Raleigh, N. C. Be sure to send the authorization in early as the State Agency cannot be responsible for prenatal or other maternity care given before the case has been properly authorized. In all properly authorized cases the fee paid to the physician by the State Agency will cover the whole case after the case has been authorized and no extra charge should be made to the patient or her family.

Home deliveries should be done where possible. At the present time, however, there are several hospitals in the State where the hospital bill will be paid by the State Agency. The physicians or local health officer will know which hospitals in the vicinity are participating in this program. The service offered is first class ward service and the fee of the State Agency to the hospital covers all costs and no additional charge should be made to the patient. If the patient wishes a private room or other services not included in this program, she or her family will have to make their own arrangements to pay the hospital. The State Agency fee cannot be used as part payment.

Pediatric Care: Children under one year of age, whose fathers are in the armed forces in the above mentioned grades, are eligible for this care. Office and home visits will not be paid for, but where hospitalization is needed, the State Agency will pay the hospital bill, in the hospitals which are participating in this program. Authorization blanks for pediatric

care must be filled out in essentially the same manner as those for maternity care. Be sure the **serial number** is filled in correctly. These authorization blanks must be filled in before, or at the time the child is admitted to the hospital, and forwarded to the local health officer at once. The hospital will provide first class ward service. No additional charge should be made to the patient or family. The fee paid to the physician for pediatric care will cover the whole case and no additional charge will be made to the patient or family.

A maximum of fourteen days' hospitalization will be authorized for obstetric and pediatric cases. Prolongation of this time may be provided by the State Agency under exceptional circumstances.

For any additional information or authorization blanks be sure to see your **local health officer, part time county physician, or Red Cross Chapter.**

1894 Kitasato and Yersin simultaneously discovered the plague bacillus.

1897 Shiga discovered the dysentery bacillus.

1898 Theobald Smith differentiated bovine and human tubercle bacilli.

OUR FRONT COVER

Beth, age four months, daughter of Mr. and Mrs. A. S. Krebs and her mother, the former Betsy Cooper.

Beth makes proud grandparents of our own Dr. and Mrs. G. M. Cooper. Shortly after Betsy's marriage to the young man of her choice, Dr. Cooper wrote "A Purely Personal Editorial" which appeared in the February, 1941 issue of the Bulletin. In this editorial Dr. Cooper feelingly expressed a prayer for her health and happiness. Our front cover gives evidence that this prayer is being answered.

This baby, although born in Cincinnati, is a descendant, on both sides, from North Carolina stock. The paternal grandmother is a member of the Vance family of Western North Carolina, and a lineal descendant of the poet, Robert Burns.

LIVE BIRTHS, INFANT MORTALITY AND MATERNAL MORTALITY UNITED STATES, 1941

STATE	Live Births		Infant Mortality (Death in the 1st Year of Life)		Maternal Mortality	
	Number	Rate Per Thousand Population	Number	Rate Per Thousand Population	Number	Rate Per Thousand Population
United States	2,513,427	18.9	113,949	45.3	7,956	3.2
Alabama	64,238	22.7	3,824	59.5	337	5.2
Arizona	12,011	24.1	1,961	88.3	36	3.0
Arkansas	40,437	20.7	1,781	44.0	163	4.0
California	124,682	18.1	4,574	36.7	283	2.3
Colorado	21,400	19.1	1,117	52.0	71	3.3
Connecticut	28,526	16.7	887	31.1	56	2.0
Delaware	5,121	19.2	220	43.0	12	2.3
District of Columbia	18,294	24.7	929	50.8	50	2.7
Florida	37,551	19.8	1,984	52.8	238	6.3
Georgia	68,244	21.8	3,972	58.2	326	4.8
Idaho	11,715	22.3	404	34.5	32	2.7
Illinois	134,451	17.0	4,567	34.0	333	2.5
Indiana	66,036	19.3	2,630	39.8	168	2.5
Iowa	46,826	18.4	1,710	36.5	128	2.7
Kansas	30,143	16.7	1,140	37.8	86	2.9
Kentucky	63,430	22.3	3,720	58.6	238	3.8
Louisiana	54,672	23.1	3,158	57.8	238	4.4
Maine	15,855	18.7	812	51.2	50	3.2
Maryland	34,287	18.8	1,802	52.6	85	2.5
Massachusetts	70,189	16.3	2,479	35.3	200	2.8
Michigan	107,511	20.5	4,164	38.7	296	2.8
Minnesota	54,462	19.5	1,877	34.5	107	2.0
Mississippi	54,454	24.9	2,978	54.7	308	5.7
Missouri	66,050	17.5	3,073	46.5	197	3.0
Montana	11,437	20.4	426	37.2	18	1.6
Nebraska	22,197	16.9	764	34.4	53	2.4
Nevada	2,181	19.8	92	42.2	6	2.8
New Hampshire	8,743	17.8	319	36.5	23	2.6
New Jersey	65,935	15.8	2,390	36.2	180	2.7
New Mexico	14,774	27.8	1,410	95.4	67	4.5
New York	211,171	15.7	6,982	33.1	494	2.3
North Carolina	84,634	23.7	5,059	59.8	337	4.0
North Dakota	13,464	21.0	509	37.8	31	2.3
Ohio	126,155	18.3	5,144	40.8	318	2.5
Oklahoma	45,447	19.5	2,161	47.5	139	3.1
Oregon	19,138	17.6	587	30.7	40	2.1
Pennsylvania	174,593	17.6	7,107	40.7	541	3.1
Rhode Island	11,582	16.2	415	35.8	25	2.2
South Carolina	47,162	24.8	3,536	75.0	294	6.2
South Dakota	11,647	18.1	476	40.9	30	2.6
Tennessee	60,537	20.8	3,346	55.3	226	3.7
Texas	136,291	21.2	7,754	56.9	494	3.6
Utah	13,745	25.0	411	29.9	26	1.9
Vermont	6,762	18.8	297	43.9	15	2.2
Virginia	58,552	21.9	3,919	66.9	235	4.0
Washington	30,567	17.6	1,071	35.0	55	1.8
West Virginia	43,827	23.0	2,680	61.1	128	2.9
Wisconsin	57,120	18.2	2,004	35.1	132	2.3
Wyoming	5,181	20.7	227	43.8	11	2.1

TOTAL NUMBER OF BIRTHS AND DEATHS UNDER ONE YEAR OF AGE (EXCLUSIVE OF STILLBIRTHS) ALSO MATERNAL DEATHS IN EACH COUNTY, WITH RATE PER THOUSAND LIVE BIRTHS, 1942

	Infant Mortality Place of Death		Maternal Mortality Place of Death		Total Births By Place Of Birth		Infant Mortality Place of Death		Maternal Mortality Place of Death		Total Births By Place Of Birth
	No.	Rate	No.	Rate	No.		No.	Rate	No.	Rate	No.
Entire State.	4,269	46.8	314	3.4	91,056	Johnston	55	39.1	2	1.4	1,408
Alamance	32	23.4	1	0.7	1,369	Jones	12	52.2	1	4.3	230
Alexander	15	55.1			272	Lee	37	60.1	2	3.2	616
Alleghany	3	25.4			118	Lenoir	86	69.8	14	11.4	1,232
Anson	34	45.3	2	2.7	750	Lincoln	30	46.9	4	6.3	639
Ashe	26	53.2	1	2.0	489	McDowell	26	37.6	3	4.3	692
Avery	20	42.7	2	4.3	468	Macon	19	37.8			502
Beaufort	74	77.9	7	7.4	950	Madison	18	41.6	2	4.6	433
Bertie	45	66.8	5	7.4	674	Martin	28	40.8	1	1.5	686
Bladen	29	39.6	2	2.7	733	Mecklenburg	167	41.8	11	2.8	4,000
Brunswick	29	77.7	1	2.7	373	Mitchell	26	64.0	1	2.5	406
Buncombe	108	48.3	7	3.1	2,234	Montgomery	11	30.6	1	2.8	360
Burke	27	29.6	2	2.2	912	Moore	23	33.2	2	2.9	693
Cabarrus	54	35.5			1,520	Nash	93	59.8	10	6.4	1,554
Caldwell	62	53.1	2	1.7	1,167	New Hanover	177	92.8	12	6.3	1,907
Camden	5	53.8			93	Northampton	23	37.6	1	1.6	611
Carteret	21	42.7	2	4.1	492	Onslow	19	36.6			519
Caswell	29	61.7	1	2.1	470	Orange	10	33.1			302
Catawba	45	33.6	6	4.5	1,340	Pamlico	14	61.9	2	8.8	226
Chatham	17	34.7			490	Pasquotank	35	64.0	6	11.0	547
Cherokee	38	65.2	1	1.7	583	Pender	20	49.5	3	7.4	404
Chowan	20	69.7			287	Perquimans	5	24.2	1	4.8	207
Clay	6	45.8			131	Person	27	40.7			663
Cleveland	51	31.9	2	1.3	1,597	Pitt	70	53.6	10	7.7	1,306
Columbus	92	71.6	4	3.1	1,285	Polk	21	73.7			285
Craven	48	65.4	3	4.1	734	Randolph	30	29.2	1	9.7	1,028
Cumberland	104	42.6	15	6.1	2,443	Richmond	42	49.8	3	3.6	843
Currituck	5	47.2			106	Robeson	139	56.6	11	4.5	2,458
Dare	3	26.1			115	Rockingham	56	41.8	2	1.5	1,339
Davidson	60	48.3	3	2.4	1,241	Rowan	57	40.1	7	4.9	1,422
Davie	13	45.1			288	Rutherford	48	44.2	4	3.7	1,087
Duplin	46	47.1			977	Sampson	58	45.9	1	0.8	1,264
Durham	139	58.1	16	6.7	2,392	Scotland	43	84.0	3	5.9	512
Edgecombe	69	53.8	4	3.1	1,283	Stanly	30	34.6	1	1.2	867
Forsyth	120	40.1	8	2.7	2,996	Stokes	20	40.9			489
Franklin	33	55.7	1	1.7	592	Surry	59	48.4	1	0.8	1,219
Gaston	104	54.2	9	4.7	1,920	Swain	9	23.3			386
Gates	15	57.5	1	3.8	261	Transylvania	14	40.6	2	5.8	345
Graham	6	25.6			234	Tyrrell	6	34.9	2	11.6	172
Granville	26	35.9	3	4.1	725	Union	35	34.3	2	2.0	1,021
Greene	17	35.7			476	Vance	59	77.2	2	2.6	764
Guilford	122	37.9	13	4.0	3,216	Wake	112	44.1	12	4.7	2,541
Halifax	73	44.6	8	4.9	1,637	Warren	42	70.4	1	1.7	597
Harnett	42	34.2	2	1.6	1,228	Washington	17	52.3			325
Haywood	32	37.3	1	1.1	857	Watauga	15	34.4	2	4.6	436
Henderson	22	32.2	3	4.4	684	Wayne	74	65.8	7	6.2	1,124
Hertford	18	37.9			475	Wilkes	45	43.4	2	1.9	1,036
Hoke	18	41.0	4	9.1	439	Wilson	70	52.9	6	4.5	1,323
Hyde	5	34.2	1	6.8	146	Yadkin	18	69.5	1	3.9	259
Iredell	52	36.5	7	4.9	1,426	Yancey	19	45.8			415
Jackson	28	57.5	2	4.1	487						

Provisional Due to Delayed Reports.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters).	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months;
The Expectant Mother.	19 months to 2 years.
Breast Feeding	Diet List: 9 to 12 months; 12 to 15 months;
Infant Care. The Prevention of Infantile Diarrhea.	15 to 24 months; 2 to 3 years; 3 to 6 years.
Table of Heights and Weights.	Instruction for North Carolina Midwives.

CONTENTS

	Page
Nursing as the Foundation of Medicine	3
Notes and Comment	7
About Vacations	9
Who Said So?—or Common Fallacies	11
News Releases	13-16
Books	16

Nursing as the Foundation of Medicine*

By WILBURT C. DAVISON, M. D.
Durham, N. C.

NURSING sometimes is regarded merely as one of the aides of medicine, but it really merits recognition as the cornerstone of its foundation. Patients are helped as much by nursing as by medical care. If examples are needed, recall that of the three hundred and twenty-nine pediatric diseases, two hundred and twenty-nine are not, at present, affected by medical skill; the patients usually recover or succumb regardless of therapy⁽¹⁾. However, the comfort and well-being of these patients are materially improved by good nursing care. Of the other one hundred diseases of children, thirty-seven can be prevented by procedures, most of which can be done and usually are done by nurses, and sixty-three respond to adequate therapy, which with rare exceptions cannot be instituted without excellent nursing skill. In fact, prophylaxis and therapy are almost impossible without nurses. What would modern hospitals and present day operating rooms be without nurses? One need only remember some of the hospitals during the last war when nurses were not always available. Contrast the office of a physician or of a dentist who has a nurse assistant with one suffering this lack. The importance of the nurse recalls Darwin's observation of a slave ant, which, "introduced into a company of helpless, starving master ants, instantly set to work, fed and saved the survivors, and put all to rights."⁽²⁾

This interdependence of medicine and nurs-

ing is not new; in fact the former profession has risen to eminence only during those epochs in which nursing has reached great heights. To many, nursing began with Florence Nightingale; but actually the profession is as old as medicine itself. During the four main cycles of medicine — Primitive, Renaissance, Pharmacy, and Modern — nursing approached adequacy in three, and only in these three did medicine really progress⁽³⁾.

Primitive Era

The prehistoric, Egyptian, Sumerian, Oriental, Greek, Roman, Byzantine, Moham-medan, Jewish and medieval periods ended in 1438 A.D., but the peak of the era was reached during the time of Hippocrates (460-370 B. C.). The greatest medical contribution of this period was in therapy, and although the use of many drugs was known, treatment usually was confined to fresh air, good diet, massage and hydrotherapy—procedures which are possible only if nursing is skilled. It is true that the nurses of this period were men, but they were nurses nevertheless. The Asclepieion at Epidaurus was as much a nursing home or sanatorium for physiotherapy, hydrotherapy and psychotherapy as any modern spa, hydrobad or Warm Springs. Hot douches, baths, poultices and even hot water bottles were used. During the eight centuries which followed the Hippocratic era, nursing lapsed into

*Reprinted with permission from the North Carolina Medical Journal.

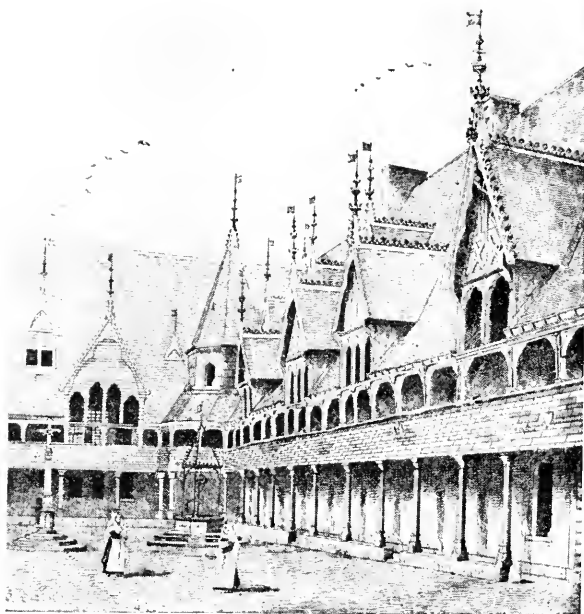


Fig. 1. Court of the hospital of Beaune, France (L'Hotel Dieu), founded 1443. (From *La Grande Encyclopedie*, 5:1053, Courtesy Librairie Larousse, Paris; Photograph by Ronco Aine, Beaune, Cote d'Or, France).

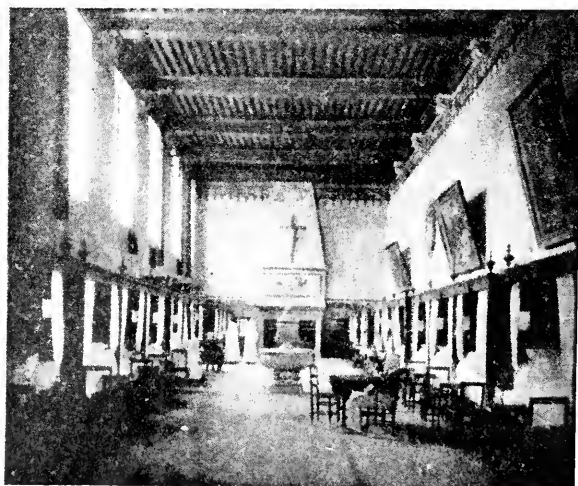


Fig. 2. A ward in the hospital of Beaune, France (L'Hotel Dieu), founded 1443(4).

Fig. 3. The novices' dormitory in the hospital of Paris (L'Hotel Dieu). (From a print of the latter half of the seventeenth century in the Bibliotheque Nationale.) (4)

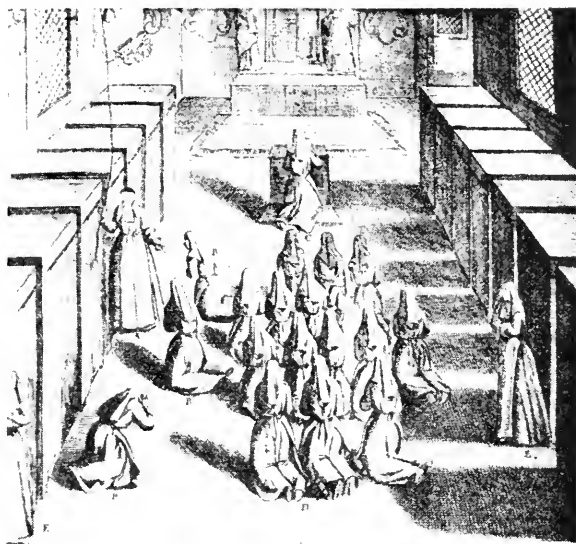


Fig. 4. A French "practical" nurse (Garde-Malade) of 1842 (Daumier print).



Fig. 5. Florence Nightingale and her nurses at Claydon, England, in 1867 (From a photograph in the possession of the Nightingale Training School, St. Thomas's Hospital, London) (4).

oblivion, and medicine declined with it. However, with the beginning of Christianity, it was the avowed duty of all Christian men and women to tend others in sickness, and by the fourth century, Deaconesses in the early Church constituted a recognized order, devoted to the sick and the needy. The Widows are mentioned with the Deaconesses in caring for patients in the Apostolic Church Order (4). Later, during the Crusades, military nursing orders arose, as for example, the Knights Hospitalers of St. John of Jerusalem, of which there was a female branch.

Renaissance

By the time of the Renaissance, nursing again rose rapidly. A product of this new era was the founding of the L'Hotel Dieu at Beaune in 1443 by Nicholas Rolin (5) (figs. 1 and 2). Numerous other hospitals were established throughout Europe, and the need for trained nurses greatly increased. Associations of women were formed to care for the patients in these new institutions, but they soon required help. To assist the Paris Association in 1630, Mlle. Le Gras and St. Vincent organized a few strong country girls, called "Filles de Charite", who later, as the need for special preparation and training was realized, became the Order of the Sisters of Charity (4) (fig. 3). It is no coincidence that the medicine of this epoch rose to eminence with the work of da Vinci in anatomy, St. Marthe in pediatrics, Harvey in physiology, Pare in surgery, and many others.

Cycle of Pharmacy

During the next three centuries expansion and inflation occurred, and hospitals sprang up all over the world, far beyond the limits of the trained sisterhoods. In spite of the magnificent clinical contributions of Sydenham, von Rosenstein, Cadogan, Rush, and Laennec, many of the physicians of this era made strenuous efforts to treat disease rather than the patient. They advocated the most heroic procedures, and the welfare and comfort of their patients suffered rather than improved from their drastic remedies. A Daumier print of a Garde-Malade (fig. 4) illustrates the depths of degradation reached by the nurses of almost all of the hospitals, except those operated by the Catholic Orders, in which discipline and decency prevailed (6). Apparently those responsible for the management of the non-Catholic hospitals could not free themselves from the idea that women in order to be faithful and good nurses must belong to some religious society and be bound by vows; consequently they made little or no effort to provide adequate training and living conditions for nurses who did not belong to religious orders (4).

Modern Era

The modern era of medicine was ushered in by the regeneration of nursing by Theodor Fliedner, pastor of Kaiserswerth on the Rhine, and his wife, Friederike, who in 1836 revived the ancient Church Order of Deaconesses. About 1850, Florence Nightingale came

to the Flidners for training. After her memorable service in the Crimean War, Florence Nightingale established, in 1860, the first training school for "new style nurses", which was similar to those of today⁽⁶⁾ (fig. 5). Her definition of nursing as "helping the patient to live" has never been improved. The modern applications of pathology, bacteriology, biochemistry, and the advances in medicine would have been impossible without this conception of nursing. It is not strange that surgery, pediatrics and preventive medicine did not develop until nursing had progressed. Only rudimentary traces of these specialties had existed prior to this era; they could not function without skilled nursing. Specific therapy, and especially general treatment and physiotherapy require the best possible nursing. "The laying on of hands," when done intelligently, still produces beneficial results. As the late Dr. Frances W. Peabody once wrote: "The secret of the care of the patient is caring for the patient"⁽⁷⁾—that is, being personally interested in the patient as a human being and not merely as the seat of a definite disease⁽⁸⁾.

The other side of the picture also must be mentioned. Just as the advances of nursing in the primitive, renaissance, and modern periods enabled medicine to progress, so in the age of pharmacy the over-expansion of hospitals beyond the limits of the trained sisterhoods caused medicine to reach a low ebb. Will our modern expansion of hospitals, some of which

have inadequate training schools for nurses, stop medical progress? With this consideration in mind, should not the medical profession become more vitally interested in nursing education? Many nursing procedures such as bathing and feeding infants, giving enemas, etc. should be, and sometimes are, taught to medical students by nurses, and some purely medical techniques are learned by nurses; but that does not mean that doctors are being made nurses or vice versa. Nursing education and medical education, though inherently different, both seek the same end—namely, the care, comfort, and well-being of the sick—, and anything which hampers one is deleterious to the other.

From the Department of Pediatrics of Duke University School of Medicine, and Duke Hospital, Durham, N. C., with the valuable assistance of Miss Judith Farrar, Librarian of Duke Hospital.

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Notes and Comment

By THE ACTING EDITOR

NURSES DR. Davison has given us a brief outline of the historical background of the nursing profession. He has shown us clearly that physicians and the practice of medicine are to a marked degree dependent upon a competent corps of nurses. Dr. Davison speaks with authority. He is Dean of the Medical School of Duke University. He commands the respect of all who are interested in medical education and the welfare of the

profession. We recommend his article in this issue of *The Bulletin* to all young women who have recently graduated from high school and who are facing life courageously and intelligently. It is more important than ever before that we consider permanent values before we make important decisions. We believe that the young women of today wish to live useful lives and to experience the satisfaction of helping make the world a better place in which to

live. To young women of this sort the nursing profession has a great deal to offer. We need nurses—The Office of War Information has recently appealed through our public press to the young women of North Carolina. The following appeared in the May 9th issue of the Raleigh News & Observer and other State papers:

"Unless the 'nurse power' of North Carolina and the nation is reinforced by large numbers this year, the Office of War Information warns, the State and nation face a growing threat to civilian health.

"The OWI is this week launching a campaign to enroll student nurses in 48 schools of nursing in North Carolina. Mrs. Marie B. Noel, special agent for the United States Public Health Service, has advised the OWI that North Carolina schools of nursing can train 1,172 students at a time.

"A survey showed this week that the U. S. Public Health Service nursing quota for North Carolina was met by 110 per cent last year, but the increasing need for nurses has boosted the goal for 1943.

"North Carolina women between the ages of 17½ and 35 years of age may enter a nursing school in the State. Most schools require at least high school science credits.

"So that no qualified woman may be discouraged for the lack of money, a number of free scholarships have been established, among them a series sponsored by the North Carolina Federation of Women's Clubs.

"Full information may be obtained, without cost or obligation, by writing Student Nurses, P. O. Box 1547, Raleigh, N. C.

"To speed the nursing program and help increase the badly needed nursing power of the State, a conference of hospital executives and nurses will be held in Winston-Salem on Monday and Tuesday of next week."

In a very true sense nurses are in the service of their country. Student nurses can release a considerable number of graduate nurses for active duty in military zones. We think that the young women who consider nursing as a profession should meditate first of all upon their opportunity to decrease the sum total of

human suffering. In the last analysis the most gratifying pleasures are those which come from the performance of some useful service. From the standpoint of monetary considerations nursing has some advantages which should be evaluated. Other advantages are that it is helpful training and experience for the home maker. Nurses are generally good mothers. When you add up the advantages of training as a nurse and compare them with the efforts which must be expended and the difficulties encountered, you will find that the nursing profession weighs heavily in the balances in relation to other opportunities available to young women.

* * *

VACATIONS Miss Batchelor has given us some very practical suggestions concerning war time vacations. As an investment in health and well being the vacation has an established value. Employers whose policy it is to give vacations with pay consider that they are purchasing increased efficiency. Those of us who take vacations at the expense of an employer are more or less honor bound to conduct ourselves so that the employer gets his money's worth. Miss Batchelor's advice about endeavoring to crowd too much activity into a vacation is most timely. Vacationers should remember that there are such things as chiggers and mosquitoes. They should also remember that severe sunburn can just about ruin a vacation. A little patience in acquiring a sun tan will pay real dividends. A little thoughtful preparation will enable us to defeat the chigger and the mosquito. Intelligent people can plan a successful vacation.

* * *

FALLACIES In Dr. Ward's radio talk which we are reprinting in this issue he discusses some common fallacies and gives much timely advice. Much of the folklore dealing with disease and the treatments therefor have no more authentic background than a fishwife's tale. The mere fact that these superstitions have been transmitted from generation to generation makes them hard to down, but with an excellent attack of

them in the clear cut style which Dr. Ward has demonstrated, we may make progress.

* * *

NEWS RELEASES

The arrangement which we have for printing the Health Bulletin makes it difficult to

carry news stories on our pages. It is only when we have news which has historic value or news which time does not soon make stale that we feel we can carry it in the Bulletin. The fact that Forsyth County Health Department was cited by the United States Chamber of Commerce along with 32 other city or county health departments for outstanding performance during the year 1942 is news of enduring value.

There are more than 60 members comprising the association known as the State and Provincial Health Authorities of North America. If the honor of being president of this Association was decided by lot, North Carolina could not expect its representative to be president more often than once in 60 years. The mere fact that our own Dr. Carl V. Reynolds, after serving less than 10 years as State Health Officer, was elected president of the State and Provincial Health Authorities of North America is a definite tribute to Dr. Reynolds and an honor to the State. The news release of his presidential address should be a permanent record in our public health publications.

Our third news release recounts the reelection of Dr. Reynolds as Secretary and State Health Officer and Dr. G. M. Cooper as

Assistant State Health Officer. This information is the source of genuine gratification to the true friends of public health in North Carolina.

* * *

OUR FRONT COVER

A view of Greenfield Lake, Wilmington, North

Carolina — now one of

the beauty spots in North Carolina. It was not many years ago that this lake was a nuisance, requiring the expenditure of a considerable sum of money each year to control malaria mosquitoes. The efforts of a few farseeing citizens have transformed this nuisance into one of the most attractive parks to be found in our Southland. Thousands of azaleas and other flowering shrubs have been planted along its borders. During the past two years more than 150,000 plantings have been made. One of the active members of the Greenfield Lake improvement association is an esteemed physician, Dr. William Houston Moore. Although a busy practitioner, Dr. Moore has had sufficient public spirit in his make-up to render valuable service in medical and public health endeavors. Every busy person needs a hobby for recreation. However, most hobbies have no value except recreation for the moment. Dr. Moore's hobby and recreation is the improvement of Greenfield Lake. His hobby will give pleasure to future generations. As the years roll by the small shrubs planted will grow and increase in beauty and the park will become an even more valuable asset of the community.

About Vacations

By MARY S. BATCHELOR, *Field Representative*
Division of County Health Work

THE season is rapidly approaching when those people who live in the east begin to think of the mountains with longing and those who live in the mountains begin to think of the seashore with equal pleasure. For vacation season is near and it has been our habit to consider a vacation as meaning a complete change of scenery and activity. Perhaps this

year, because of the crowded transportation facilities and the demands of the war effort, our vacations will no longer mean a change of scene, but it is hoped that they will still mean a change in activity. When one considers the strain under which many people are working today, a strain which has been continuous for many months, a holiday begins to assume

an importance it has never had before. For it is a time in which to relax and play; to forget the problems which we carry with us in our work-a-day lives. It is a time to rebuild ourselves so that we may return to work with a new vigor and enthusiasm. It is a time to let up and rest; a time in which to refresh tired bodies and minds.

For some people a vacation is far from this. In many instances, a vacation has meant two short weeks into which one tried to crowd all the things one was unable to do during the rest of the year. It was a time in which the enthusiastic vacationer speeded up instead of slowing down. Eager to make every second count, he went like mad from golf course to tennis court, or drove at top speed from one resort to another in order to see everything there was to see in the given time. The result was that in two short weeks he managed to subject himself to more strain than would have been required in a month of regular activity. He returned to work more tired than when he left, less willing to cope with the problems which awaited him, and of course it was necessary for him to go through the period of post-vacation blues which attack the returned vacationer.

We haven't time now for vacations such as these. With the whole world engaged in a struggle to produce in order that armies may be equipped and supplied, we must make every second count for something accomplished. Vacations we need and should have, but we should consider them as an interlude in our working lives, an interlude in which to prepare ourselves for more efficient activity. Certainly the purpose of a vacation is defeated if one finds oneself unwilling to return to work and unable to pick up where he left off.

This then is a plea for saner vacations, but it is also a plea for vacations. Don't feel that the work in which you are engaged will fail because you are away from it for a while. If you return to it with restored energy and vigor, the work will progress all the faster.

Don't feel that without a change of scene there can be no vacations. It is possible to put in a very pleasant two weeks without stirring

from the spot in which one happens to live. By the time you are ready for your vacation the weeds in your Victory Garden will be in urgent need of attention. Why not tackle them during the time you have for your own? Perhaps battling weeds and bugs will take the place of the exercise you used to find in playing golf. And you have a choice as to how much exercise you get in this way. You can weed—or not weed—as you choose. Don't tear into the garden the first day you are at liberty, determined to do it all at once. That is the same attitude we took toward our pre-war vacations—to do too much all at once before unused muscles were ready for so much activity. We paid for it with sore, aching muscles which continued to protest long after the exercise itself was forgotten.

Don't feel that without seeing new faces, meeting new people, you will not have a change. Most of us see too little of our friends because of the push of working affairs. Why not take the opportunity a vacation affords to visit with them unhurriedly, a thing that is not possible every day? And of course it is no longer necessary to go away to see new people. There has been such an influx of people to North Carolina that there are new faces wherever one turns. Why not take part of your vacation time to get acquainted?

What of the articles in the current magazines that were marked and put away to be read, but weren't read because there never seemed to be time? What of the novels one hears discussed on every side? Some of them are worth reading, some are not, but you have your choice, you may read them or discard them as you like.

What of the war work that you would like to do for which you never have time? There are many activities that would welcome such time as you have to give to them during your vacation. Some of the work is pleasant to do and might possibly be very different from anything you have ever done before.

None of these things will appeal to every vacationer. There are many people who like neither gardening nor reading and whom visiting bores enormously. But the fact of the

matter is that one has a vacation in which to do as one likes; two weeks in which one has a choice of what one will, or will not do. Some people are all for an active vacation; with others, action is the one thing to be avoided. Whatever your choice may be, it can be managed. If you want action, there is plenty to do where you are. It is not necessary to search for it somewhere else. If you want to be lazy, it is possible to be more completely lazy at home than anywhere else. (As a matter of fact it is not even necessary to pack up for a home vacation, which should appeal to the "do nothing" school!)

The government has not prohibited all

travel and for those who would not dream of taking a vacation without going somewhere, it is still possible to take a trip. It will not be the vacation one might have had a few years ago. Traveling conditions are not what they were, but if travel means vacation for you, it can still be managed within limitations.

We hope that you can manage to take the vacation you want. Whatever appeals to you in the way of relaxation and rest, we hope you can arrange for it. We hope you will find the limited vacations of the war years among the happiest of your life. Take them with a clear conscience and a joyful spirit, be grateful that vacations are still possible here.

Who Said So?...or Common Fallacies*

By J. LABRUCE WARD, M. D.
Asheville, N. C.

WHEN I was a youngster, a playmate, who was a firm believer in ghosts, tried to convince me that he had seen one cross the road. He proved it by showing me the place where it had crossed the road. If you are satisfied with such proof, then the customs and fallacies which I shall discuss can easily be proved correct.

Do you believe in worms? This question has often been asked me. The answer is: Do you believe in automobiles? There is as much reason for believing in one as in the other. There are many types of worms, (or, if you prefer, intestinal parasites). They are usually found in the intestinal canal but may migrate to other parts of the body. They vary in size from less than a half inch to more than twenty feet. And they may cause many symptoms or none. Don't think that because a child is pale, restless and picks at his nose he must have worms. There are only two certain signs of worms; one is to see the worms and the other is to see their eggs by examining a portion of the bowel discharge under the microscope. Thus we can determine what type of worm the patient is playing host to and this is necessary because a drug which will kill one type

of worm will have no effect on another. So when you ask your druggist, (and some druggists will prescribe for patients), for worm medicine, be sure to know the name of your worm. Worm medicine is never pleasant to take, and sometimes produces alarming symptoms or even death. Another firmly held belief is that when worm medicine is taken and no worms are expelled, that they have been "cut up" by the drug. A drug which could do that could also "cut up" the lining of your intestine. If anybody tells you this fairy tale it may be because he has treated you for worms which were in somebody else's intestine.

When a mother brings her infant to the doctor and says, "I put the baby on the bottle because breast milk didn't agree with him," she is repeating a belief which is capable of doing mischief. Remember this; breast milk always agrees with a baby. Cow's milk always agrees with a calf. Despite the great variety of artificial formulae which are now available, the fact remains that there are more deaths among artificially fed infants than among those who have access to the maternal font which

* A radio talk over Radio Station WIZE, Asheville, N. C., reprinted by permission of the station.

nature has provided. When a baby vomits or has colic while on the breast, don't suspect the milk but suspect the baby and have him examined.

Another very harmful fallacy is the belief that when a child has a cold, the best remedy is a laxative and that when mucus, or "cold" passes from the bowel, it means that the baby is being cured. This mucus may have been swallowed. If not it is caused by the laxative and repeated purging only adds insult to injury. The way to prevent ear infections and pneumonia is to put the child to bed for a few days. Spoiled children cry when kept in bed but this will do them less harm than running about. It will also be less harmful to the neighbors.

What should be done when a child has a head injury? First I shall tell you what not to do. You should not rush the child to the hospital or to the X-ray. The safe thing is to place the child on a bed, elevate his head and put cold cloths to the head and a hot bottle to the feet. then keep him as quiet as possible until the doctor arrives. Don't try to keep the child awake. If the injury is not serious, it is well for the child to sleep. If hemorrhage or concussion has occurred, the child may become unconscious but attempting to keep him awake will only add to the danger. Taking an X-ray picture is never indicated unless the child develops symptoms which indicate that an operation should be performed. Without symptoms, an operation is never indicated even when there is a large fracture. The latter may not disturb the patient but will certainly disturb the parents.

When a foreign body such as a screw or a coin is swallowed what should be done? As a rule, any object which is small enough to pass into the stomach, will be expelled through the rectum. No special diet is indicated and purgation is dangerous. In the case of pointed objects, like an open safety pin, there is some danger of perforation. In such cases, if there is pain or obstruction, an X-ray picture should be made, so that the surgeon may determine the type of operation necessary.

That a child should be starved when he has

a fever is a custom hoary with age. It is true that some patients will not eat when they have fever, however, if the child desires food he can usually digest it and will be better off for having it. The human machine must have fuel and unless food is furnished, the body tissues will be consumed. As a rule, it can be said that there is only one indication for starving a child—when the patient is vomiting.

Another pernicious practice is that of giving drugs to reduce fever, regardless of the age or condition of the patient. There was a wise old physician by the name of Hippocrates who lived several hundred years B. C. and who said, "fever is remedial in purpose and effect." That he was correct is only now being recognized by some physicians. Others still prescribe a fever reducing drug whenever the temperature is elevated. In nearly all acute infections our body temperature rises. This is proof that nature uses fever to fight infection. Nature never does things by chance. It is all a part of "the great design." In infants and occasionally in young children, it is advisable, in certain cases, to lower the temperature. This can usually be accomplished by the use of water. Most drugs used for this purpose are depressing and some are dangerous. So, we may say that, except in rare cases, a patient is entitled to his fever. The best physician is the one who tries to find the cause of the fever so that the patient may be treated appropriately. This requires more intelligence than does writing a prescription for an antipyretic. When patients with certain diseases do not have fever, it has been found beneficial to cause fever by artificial means. Thus, while some physicians are producing high fever in order to cure the patient, other physicians are working just as hard to deprive the patient of his fever. Does this make sense? You are correct, it doesn't.

Another erroneous belief is that when a child is vomiting because of a digestive upset, the remedy is to give him medicine. As a rule, when a child vomits fruit juice or water, he will surely vomit medicine. Food should be withheld for a time and only small amounts of water, fruit juice or carbonated drinks permitted. A child can do without food for

several days but not without fluids, therefore, if he is unable to retain fluids for twenty-four hours, he should receive them under the skin or intravenously.

In this the greatest national emergency which our country has known, it is our duty to prevent illness as well as to promote health. Many physicians are serving under "Old Glory" which leaves fewer to care for the civilian population. Unless the public cooperates better than it has in the past, it will be impossible to

take care of the sick. Do not call a physician, even for advice over the phone, unless it is necessary. Do not wait until night to call a physician when a patient has been sick all day. In an emergency, do not call six physicians when only one is needed. If you are well enough to go to the physician's office, he is too busy to visit you at home. Having discussed many odds and ends, we close by quoting Kate Smith: "thanks for listening."

News Releases

Washington. — Names of 33 cities and counties in 18 states winning awards in the 1942 National Health Honor Roll Contest were announced today by the United States Chamber of Commerce and the American Public Health Association, which jointly sponsor this annual contest in community health promotion and preservation.

War busy Michigan led all other states both in the number of participating communities and awards won.

This year's awards in this 14-year old program were made to those areas among the more than 550 participating communities for general and specific achievements in maintaining a well balanced public program for protecting the public health.

Commenting on the awards, Dr. Henry F. Vaughan, chairman of the committee on Administrative Practices of the American Public Health Association said:

"These annual awards are bestowed on communities which in spite of the present war-time demands have provided community health protection services against the spread of tuberculosis, venereal diseases and other communicable diseases, have maintained protective educational services for mothers and children, have maintained safeguards against the dangers to the greatly increased activities in the war industries and have protected milk and food supplies and general sanitation in the field of water supplies and sewerage disposal. It's particularly gratifying to witness the progress

made against venereal diseases and in developing health conservation methods in the field of industrial hygiene."

The President of the United States Chamber of Commerce, Eric Johnston, commended the winning communities.

"It is an achievement of the first order," said Mr. Johnston, "and reflects great credit on the people of these localities for never losing sight of the importance of civilian health. It's our hope that this record will spur other areas to build up their health protection services as a home front contribution to this great war effort."

The thirteen winning cities:

Milwaukee, Wisconsin
Madison, Wisconsin
Racine, Wisconsin
Detroit, Michigan
Baltimore, Maryland
Greenwich, Connecticut
Hartford, Connecticut
Newton, Massachusetts
Reading, Pennsylvania
Hackensack, New Jersey
Peoria, Illinois

Evanston, Illinois

La Salle-Peru-Oglesby, Illinois

The twenty winning counties:

Sanilac County, Michigan
Van Buren County, Michigan
Staginaw County, Michigan
Davidson County, Tennessee
Gibson County, Tennessee

Memphis-Shelby County, Tennessee
Fayette County, Kentucky
Madison County, Kentucky
Louisville-Jefferson County, Kentucky
Lauderdale County, Mississippi
Washington County, Mississippi
Jones County, Mississippi
Olympia-Thurston County, Washington
Whitman County, Washington
Arlington County, Virginia
Forsyth County, North Carolina
Glynn County, Georgia
Gallatin County, Montana
El Paso County, Texas
Santa Barbara County, California

Awards will be presented to the winners during the Chamber's annual meeting, to be held in New York.

Washington—Man lost his longevity through disobedience to the divine law and only through conformity to nature's law can that longevity be regained, Dr. Carl V. Reynolds, president of the State and Provincial Health Authorities of North America, declared in his annual address before that body in Washington.

He pointed out that in the beginning, according to the Bible, man lived hundreds of years: that, because of sin, he was put on his own and that when the Ninetieth Psalm was written the span of human expectation had been reduced to "three score years and ten"—or 70—years. Included in this period, he pointed out, was the destruction of the world by the flood, when God spared Noah, his family and specimens of animal life for future propagation.

But man is on the upward climb, Dr. Reynolds said, reminding his hearers that since 1850 the span of human expectation at birth in the United States has been increased from 38 to nearly 64 years, or to within 6 years of what it was when the Ninetieth Psalm was written.

By conforming to the laws of nature, he said, there is no reason why the human race should not continue to regain its lost longevity. Preventive and curative medicine, which in-

clude and are aided by modern science, offer the way, he emphasized—the way of escape from the curse that was imposed when Eve was tempted by and yielded to the serpent in the garden, which he termed the first dictator.

"The serpent in the garden today," he said, "is exemplified by those forces of evil impersonated by Hitler, Mussolini and Hirohito, the Nazi and Fascist philosophies of life, as opposed to the higher concepts. These spiritless devils," he continued, "represent all that is evil in the world and our mission is to make them crawl on their bellies and trample them underfoot."

Humanity can be rehabilitated and is being rehabilitated by the proper use of forces at its command, Dr. Reynolds said. But, he added, it must throw off ignorance and utilize those forces and materials which are available. By doing this, humanity can give an affirmative answer to the question, "Am I my brother's keeper?" and can back up that answer by its constructive efforts.

Dr. Reynolds declared that "the world today is full of new and complex problems" and that "there must be a reappraisal of human values with a view to correcting many of the maladjustments that have continued too long to harass mankind and retard his progress.

"The federal, state and local governments are beginning to realize and appreciate the value of health and its social and economic structure," he asserted. "The agencies are investing vast sums of money to give their citizens restorative measures.

"We, as medical men," he warned, "must realize the vast importance and effect of this appropriation and seize the opportunity to guide, direct and control its policies. All of us recognize that health security is basic in the importance of human happiness. We must appreciate the fact that our people are not receiving or accepting the services available. We must appreciate the fact that they need them and should have them; that existing conditions are not as they should be; that the cause of these conditions must be uprooted, and that it is imperative to adjust ourselves to the new order of things.

"To regiment medical service is to destroy its efficiency," he continued. "To preserve medical service on its present standards and promote its continued growth, we must encourage, foster and stimulate individual attainments.

"To prevent regimentation," Dr. Reynolds went on, "we must not only devote ourselves to science and medicine and the demands of our practice, but recognize that selfish individualism is hazardous and that mass protection is the necessary element in social security."

At this point Dr. Reynolds asked, "May I be so bold as to suggest a plan?" He continued: "We have our people needing medical care in one group. We have the medical profession to administer that medical care in another group. We must have the best mind available to direct this most important and vital element in moral, mental, physical, social and economic welfare.

"To whom shall we turn for this service? The unanimous decision would be that the medical mind is the better qualified. This being admitted, I present to you a board of directors, namely, the chairman of the executive committee of the State Medical Society, representatives from the county medical societies, governmental representation, state health officers, county health officers, representatives from public welfare, public instruction and parent-teacher associations, hospital boards, institutions for the blind, mental hygiene, civic clubs, and philanthropic citizens."

Such a board, Dr. Reynolds said, could devise ways and means to render service to the citizenry in preventive medicine, medical care, maternal and child hygiene, care of crippled children, the mentally sick, the blind and other handicapped groups.

"An honest discussion," he continued, "will bring forth a sane decision and, to my mind, it will prevent regimentation of medical men, retain and not destroy their usefulness.

"Qualification, not political favor, is what must count. The financing of such an undertaking should come not through state medicine, contract practice or regimentation, but through supplemental medicine."

Dr. Reynolds then went into a discussion

of the maladjusted, the mentally sick, and other groups which demand sympathetic treatment, declaring that a special study of causes should be made, with a view to correcting these thereby emptying institutions for the mentally sick and others by cutting off the supply through prevention rather than having to keep thousands of them under constant care and treatment.

Dr. Reynolds went into a consideration of school health, declaring this is a question which must be worked out through the co-operative effort of educational and public health leaders. In other words, he said, there must be coordination of effort and of facilities, in order to bring about the desired results, which cannot be obtained in any other way. "By carrying out a program of this nature," he said, "both the schools and the health departments would receive advantages. Schools would find the pupils well cared for in health protection and in health knowledge from the beginning of the preschool period on through high school. Health departments would know that the procedures which had been used in the schools had conformed to recognized standards of health work throughout the country.

Dr. Reynolds concluded his presidential address with a discussion of nutrition and oral hygiene, stressing their importance in the health picture of the nation. He emphasized the importance of qualitative as well as quantitative food intake for the correction of dietary deficiencies. "Through dietetics we can do much in a field yet scarcely touched," he declared. And as to the value of oral hygiene, he declared that "a dental program when conducted by public health dentists who are trained for this special work is one of the greatest adjuncts of public health and, as a health-teaching agency, is second to none."

Raleigh.—The North Carolina State Board of Health has announced the re-election of Dr. Carl V. Reynolds as Secretary and State Health Officer and Dr. George M. Cooper as Assistant State Officer for terms of four years each. The Board, at the same time re-elected Dr. S. D. Craig of Winston-Salem as president and Dr.

J. N. Johnson of Goldsboro, member of the Board representing the dental profession, as vice-president. Dr. Craig named Dr. Hubert B. Haywood of Raleigh and Dr. Johnson to serve with him as members of the executive committee, of which he is the chairman.

Dr. Reynolds, a native of Asheville, became a member of the State Board of Health in 1931 and was elected as its president in 1933. He was chosen, on November 10, 1934, to fill out the unexpired term of the late Dr. James M. Parrott as Secretary and State Health Officer. He was elected to serve in his own right in 1935 and re-elected in 1939. The term for which he was elected expires in 1947. He graduated in medicine from the University of New York and took post-graduate work at Brompton Hospital in London. He was formerly city health officer of Asheville and is a past president of the State, Territorial and

Provincial Health Authorities of North America. Various projects have been taken on by the State Board of Health during his tenure of office and the work of the Department has been greatly expanded, notably in the control of syphilis.

Dr. Cooper, a native of Sampson county, where he served as health officer, became associated with the State Board of Health on May 1, 1915, as head of the Bureau of Rural Sanitation. He has since served in various capacities, including that of acting health officer. Besides being assistant health officer, he is in charge of the Division of Preventive Medicine and director of the State Board of Health's maternal and child health services. He directs the maternal and infancy clinics. During his tenure of office there have been marked reductions in maternal and infant death rates in North Carolina.

Books

Stuhlman, Otto, Jr. "AN INTRODUCTION TO BIOPHYSICS", John Wiley & Sons, New York, 1943, 375 pp.

This book should prove of inestimable value to the premedical and medical student for whom no doubt it was chiefly intended. It offers a good review of the physical principles underlying the medical sciences and provides splendid practical applications to the fields of medicine. The following topics are adequately discussed in the light of present day knowledge: X-rays and radio-activity, biophysical optics, emission and absorption of biophysically active light, structure and properties of surfaces and membranes, nerve conduction (including electro-encephalography), auditory biophysics, and the compound and electron microscope. The illustrations are attractive and the general appearance of the book good. To the practicing physician "An Introduction to Biophysics" should be a good reference book which will enable him to understand better the more recent developments. For example, the discussion of the use of radioactive elements as tracers in the study of mineral metabolism

(calcium, iron, iodine, etc.) should make the literature on advances in nutrition more comprehensible.

Notable omissions are: mechanics involved in movement of the parts of the body through muscle contraction, principles governing the flow of liquids in a closed system (blood pressure), the work concept as applied to the heart, electrocardiography and infra-red photography.

Dr. Stuhlman is Professor of Physics at the University of North Carolina, and for several years he has taught a course in biophysics to the premedical students. On the whole, his book fills a long felt need for a practical physics for the medical profession.—B. W.

For all your days prepare,
And meet them ever alike:
When you are the anvil, bear—
When you are the hammer, strike.
—Edwin Markham

It is not an army we must train for war; it is a nation.—Woodrow Wilson.



The Health Bulletin

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Vol. 58

JULY, 1943

No. 7



DR. CARL V. REYNOLDS, M. D.
State Health Officer

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
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Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters).	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
The Expectant Mother.	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years. 3 to 6 years.
Breast Feeding.	Instruction for North Carolina Midwives.
Infant Care. The Prevention of Infantile Diarrhea.	
Table of Heights and Weights.	

CONTENTS

Annual Report North Carolina State Board of Health to Conjoint Session State Medical Society	Page 3
Notes and Comment	32

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CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

Annual Report North Carolina State Board of Health To Conjoint Session State Medical Society

By CARL V. REYNOLDS, M. D.
Secretary and State Health Officer

May 12, 1943

SINCE the 1942 report of the activities of the North Carolina State Board of Health was submitted to the members of the North Carolina State Medical Society, there have been many progressive advances made (in spite of the adversities of war) within its nine divisions from coordinated programs at the State level, with similar progress at the city and county levels.

These advances will be enumerated in part in descriptive material listed under the various departments. It is my purpose at this time to review a few of the high points with the hope that it will stimulate a desire for a more complete picture of the work which may be read during your leisure moments.

Upon every occasion that I address this body, or any other medical group in subjects relating to preventive and corrective medicine, I have foremost in my mind the thought that we have been, we are and will be making changes for the better or for the worse, and it seems to me that it is imperative that we become concerned lest other agencies than our own control and direct advances which may terminate in adversities.

I shall not discuss social medicine, State medicine, nor contract practice, for it is not

the time or occasion, but I deem it not out of place, but instead my duty to inform you that there are vast sums of money being spent, and more in the hopper, that will become available, and that we should awaken ere it is too late to plan, guide, direct a better care program that will contribute to the advantages of all and to the detriment of none.

Fundamental changes are being made and changes should be made to more adequately meet the crying needs of humanity.

A happy solution to this perplexing problem can be had.

The Federal, State and municipal governments are realizing and appreciating the value of health in the social and economic structure. These agencies are now investing vast sums of money to give to their citizenry restorative measures, and so, I repeat, that as medical men we must realize the vast importance and effect of these appropriations and seize the opportunity to guide, to direct and to control its policies.—We cannot do anything by sitting on the side lines and “booing”. We must get in there and pitch!

In 1934 North Carolina was expending from State, County and City funds and from philanthropic sources in preventive medicine

\$604,312.00. Today we are expending \$3,148,000.00. Is that significant, and does it indicate a trend?

We have 808 workers among our happy, contented and enthusiastic family, most all of whom have had special training in respective fields. It is to the credit of our Board of Directors—the policy-making body—for their deep interest and time, that we have made few mistakes, and to the division directors who administer the activities, the general personnel at the State level and at the same levels intra-State, that enviable advancements have been made.

In this all-inclusive war, the personnel seem to have an endowed courage and energy, coupled with the capacity, the understanding and love for service beyond self: so, it is with keen enthusiasm I will present to you some excerpts of their accomplishments.

In our School of Public Health at the University of North Carolina another meritorious step has been taken in the establishment of a division for a course in Public Health Nursing. Miss Ruth W. Hay, Professor of Public Health Nursing, is director, and as evidence of its need and importance, we had enrolled this year 38 nurses.

We are glad to announce that we have added another very important Chair in the School of Public Health, namely, a Health Education Training course, with Dr. Lucy S. Morgan, as instructor in this new field. We were fortunate, too, in securing through Dr. Mayhew Derryberry, Chief of Field Activities in Health Education of the U. S. Public Health Service, twenty fellowships for applicants in this field of Education from the W. K. Kellogg Foundation—students entering on these fellowships coming from all parts of the United States.

In July 1942, a joint State-Federal project for the production and evaluation of venereal disease educational materials was sponsored by the U. S. Public Health Service and the Zachary Smith Reynolds Foundation, as an adventure in this specialized field of venereal disease education. The Institute was set up to originate educational materials, to demonstrate

them and to evaluate their impact—under the direction of Mr. Capus Waynick.

And again, we are proud to announce that there has been established an Academy of Public Health at the State Board of Health. We meet once a month, all personnel are members, and have equal rights. The objective is to review the entire program of the various divisions in order that we may have a general knowledge of the coordinated whole. It acts as a continuous refresher course, and promotes closer fraternalism and a social interest through occasional gatherings for that purpose. The usual attendance is about 125.

Next, I would like to invite your attention to the need of a Mental Hygiene program, so essential in the Department of our "Tree of Public Health."

Is it not a stimulating challenge to use the knowledge we have to lessen the incidence of mental illness? Psychiatry has advanced to the extent that detecting early manifestations that lead to permanent mental disturbance could be prevented or cured if discovered in its incipency. We have devoted, and are devoting, our efforts to the custodial care of the permanently disabled with an ever-increasing incidence, with little or no effort being made to explore the field of causes and to establish ways and means of reaching our objective through preventive measures, early pre-hospital diagnosis, for it is here we have the greatest chance for arrestment or cure.

Our immediate approach should be to attack the problem by attacking those diseases without psychosis; namely, mental deficiency, alcoholism, drug addiction, personality disorders, psychopathic personalities; and those with psychosis, general paresis, alcoholic, and drug addiction, etc.

SYNOPSIS OF DEPARTMENTAL REPORTS

DIVISION OF PREVENTIVE MEDICINE:

Briefly, there have been few changes with the exception of the exigencies of war that made it expedient to discontinue the postgraduate work for the physicians at Duke Medical School and Hospital, teaching in the University of

North Carolina School of Public Health for the duration. Transportation difficulties and the scarcity of available physicians to conduct our Maternal and Infancy clinics have been a handicap to progress, but with those available and the services of health officers, the clinics continue to do a great deal of good in teaching the 20,000 pregnant women who are attended by midwives. The effectiveness of this work through the years is shown by the fact that the maternal and infant death rate for 1942 reached the lowest point in the history of North Carolina—the maternal rate dropping to a low of 3.4 as against 4.1 in 1941 per one thousand live births, and the infant death rate to a low of 46.8 as against 59.4 in the previous year.

The most important new work of the division is the acceptance of the U. S. Children's Bureau offer to participate in a plan for extending obstetric and pediatric service to wives and babies of men in certain branches of the armed services.

CRIPPLED CHILDREN: In the locating service of this department, as of December 31, 1942, there were 20,228 on the State Register, an increase of 7%.

There were 308 clinic sessions during the year, at which 9,921 examinations were carried out.

There were 1,419 children under care in hospitals during the year, of whom 1,211 were treated and discharged.

DIVISION OF COUNTY HEALTH WORK: During the present fiscal year the inauguration of whole-time county or district units have been on the march. Five new counties have joined the ranks, making a total of 88 of the one hundred counties in North Carolina, and full-time health service continues in 6 city health departments. To express it in another way, 95% of North Carolina's 3,571,623 inhabitants are now under qualified health organizations.

To partly compensate for our losses to the armed forces, changes have been made in personnel, but the health officers have met this unprecedented situation with a patriotic fervor and are doing a yeoman's work in

assuming added responsibilities, and likewise the same spirit prevails among the engineers, sanitarians, nurses and clerical workers.

We appreciate, and are grateful to the U. S. Public Health Service, for the many competent Service men and women sent to us for the duration on a lend-lease basis. Had it not been for this assistance we would have been seriously handicapped.

The Orientation Course for war emergency public health personnel was held at the State Board of Health at which we secured, for the duration, the services of one health officer, 15 nurses, 6 sanitarians, and 1 follow-up worker.

This division has an enormous and important organization and momentous job, and it is commendable that it has been so successful in maintaining its organization to the extent that it has.

DIVISION OF EPIDEMIOLOGY: In the summary report of this Division you will learn of its many activities and the completeness of its work. Lodged in this Division is the Venereal Disease Control Unit, and there are a total of 309 venereal disease clinics, with 414 clinic sessions held weekly. And, I might add that clinic services are now available to 95% of the State's population. This Division distributed venereal disease drugs to the amount of \$6,508.34 to the private physicians of North Carolina, without charge, physicians submitting records to us.

The Central Tabulating Unit reveals that we received reports of 15,151 new untreated syphilis cases for the year. Private physicians, hospitals and other institutions reported 2,536 new untreated syphilis cases. During this period an average of 24,606 patients per month attended public clinics for treatment or clinical aid for syphilis. We administered 822,769 treatments for syphilis. There were only reported 7,617 new untreated cases of gonorrhea and chancroid. Private physicians, hospitals and other institutions reported 4,141 new untreated cases of gonorrhea.

Due to the war emergency, the Malaria Investigation and Control Unit has changed some of its policies concentrating in its blood

slide surveys within the areas around military camps. In this year a total of 23,942 malaria blood slides was taken in 15 counties. In cooperation with the U. S. Public Health Service, the war areas malaria program now has 350 people employed.

STATE LABORATORY OF HYGIENE:

You can only gain even a bird's eye view of your State Laboratory of Hygiene's activities and its immense value to our people by reading the full report.

In our new laboratory we have been able to perform a greater volume of work than would have been possible without the additional space. During 1942—692,231 examinations were made on specimens sent to the laboratory. In 1941 a comparable number was 575,312.

Serological tests for syphilis still comprise the principal load of the laboratory so far as specimens are concerned. In 1942 there were 613,251 serological tests for syphilis compared with 485,243 in 1941. In 1942 there were 216,066 tests for the Selective Service System and in 1941—57,755 from this source.

It will be interesting to note that tabulations indicate 11.5% of all specimens are reported as giving positive reactions. A break down of this will be found in the Conjoint Report.

During the year 1942 we received 774 animal heads to be examined for rabies. It is of interest to note that during this period we continued to make mouse inoculations and established the diagnosis of rabies in eight instances where the microscopic examination was negative.

The demands upon the laboratory for typhoid vaccine increased markedly during 1942 when 891,164cc were distributed as compared to 629,767cc in 1941. During the year, there has been a marked trend toward the policy of administering one booster dose of typhoid vaccine each year to those who have previously had a complete course of three doses. It is generally established that the administration of this booster dose will give a uniformly higher degree of protection than the previous method of administering three doses every three years. If practiced, it should decrease

the instances of failure of the vaccine and protect and decrease the amount of vaccine which the laboratory would be required to prepare.

It is gratifying to recount that our Improved Pertussis Vaccine is increasing in popularity, although there is not nearly as much of it being used as we feel should be used.

Our Nutrition Laboratory under the direction of Dr. D. F. Milam, has studied 927 specimens of blood from the following sources: Wayne County Survey; National Youth Administration Center, Rocky Mount, and the personnel of the State Board of Health. The following are routine examinations on each specimen: Red Cell Count, Hematocrit, Hemoglobin, Total Protein, Albumin, Carotene, Vitamin C and Vitamin A. Doctor Milam has a very interesting summation of the Wayne County survey in the summary of this Conjoint Report. Look it up!

DIVISION OF VITAL STATISTICS: I only wish I had time to read to you the Division of Vital Statistics' report for it is the book-keeping of life, and this year's report shows a great improvement in our death rates over previous years. In fact, the death rates in many illnesses are the lowest in our history.

The death rate from all causes was the lowest, 8.1 per 1000 population, for any year since the beginning of registration in 1913.

There were 90,056 births reported in 1942. These outnumbered the 29,613 deaths recorded by 70,443. This represents the greatest natural increase ever shown during any year.

In addition to registering the regular birth and death certificates, over 75,000 delayed certificates of birth were filed with the Division in 1942.

DIVISION OF SANITARY ENGINEERING: The promotional work of this Division has been quite successful and in its report it accounts for 20 new water systems and plants; 14 new sewerage systems, and 12 new sewage treatment plants. Naturally, for the sake of brevity only, I am leaving the report to be studied at a later date, more in detail.

It will be of interest to note that in connection with the Ten Point Program for

Emergency Preparedness for Water Works, surveys have been conducted in 103 North Carolina cities and towns, resulting in many precautionary measures being instituted for the better protection of our public water supplies against sabotage and air raids.

The rapid expansion of military bases in North Carolina during the past year has greatly increased our supply of milk and sanitary needs. Every effort has been made and committees appointed to cooperate with the military authorities, the State Department of Agriculture and local health departments in matters pertaining to the situation, and we hope that a satisfactory adjustment can be made in the early future.

DIVISION OF ORAL HYGIENE: The progressive policies of our dental program in emphasizing the importance of the educational measures introduced in the schools by the dentists who have had special training and the corrections made among the indigent, and the referrals of those who are able to pay to the private dentists, demonstrates beyond a shadow of a doubt that correlation and co-ordination of such activities will serve to the best advantage of the whole people and stimulates, rather than retards, dental service on its present high standard, and promotes its continued growth, fosters and stimulates individual attainments as recognized by the compensation to the dentists commensurate with its importance.

Reports show that through March of this school year 42,433 underprivileged children had the necessary dental corrections made for them by the school dentists and that an even greater number of privileged children were referred to dentists in private practice. In addition to the corrective work, the school dentists have taught mouth health to approximately 100,000 children in their own class rooms and have distributed to the teachers many thousands of sheets of the mouth health education material prepared by the educational consultant on the staff.

During an average month 5,000 children received dental corrections and it was necessary to extract only 200 six year molars.

This presents very convincing evidence of the effectiveness of our efforts in mouth health education. During this same month the dentists filled 1,600 six year molars. Had it not been for this service provided for the underprivileged, these teeth, in all probability, would have been neglected and eventually lost.—This should be gratifying to us all.

DIVISION OF INDUSTRIAL HYGIENE:

The war has forcefully brought to the forefront the importance and value of industrial hygiene for the protection of the health of the employee and the prevention of man hours lost. Industries are constantly increasing their request for the examination of their employees. To illustrate:—The Durham Health Department requested us to make a tuberculosis survey in some of the leading industries of the City of Durham. Of the 9,000 employees examined in the initial study, our records show that 186 cases of tuberculosis were found. Approximately half of this number appeared to be active from the X-ray standpoint. A goodly number of the remaining half were thought to be suspicious of active disease, and were referred to local physicians. Approximately 60% of these cases were in the minimum stage.

The ever increasing demand for mica and other strategic minerals made necessary the examination of large numbers of men for this industry. More than a thousand were examined on a single visit.

Dust counts are being made and working environments evaluated as rapidly as possible with the men and equipment at hand. All employees examined and found to be suffering with silicosis, asbestosis, or other diseases are referred to their private physicians for care and attention. To give you an insight as to the extent of this work, examinations—clinical and X-rays in 1934-36 were 567; in 1940-42, there were 5,028. Blood specimens collected for serological tests in 1936-38 were 3,100; in 1940-42 there were 5,800 such tests.

NUTRITION SERVICE OF THE STATE

BOARD OF HEALTH: The problem of nutrition is a very broad one. It involves production, conservation, storage, transportation, distribu-

tion, preparation, education, economics, and medical and public health considerations. As such the problem cannot be solved by one agency working alone. Realizing this, the State Nutrition Committee, which I told you about last spring, has organized sub-committees to conduct State-wide coordinated activities as follows:

1. Publicity and information
2. Food production
3. Food conservation and utilization
4. Public health and clinical nutrition services
5. Education in nutrition through the regular school program, through the school lunch program and for adults
6. Nutrition services for industrial groups.

The State Committee has sponsored the organization of nutrition committees in every county, with sub-committees identical with those named above for the State Committee. To date, such committees have been organized in 89 of our 100 counties.

I have succeeded in securing funds to establish a nutrition service in our State Board of Health. So, within a reasonable period of time, I hope to be able to report to you that we have established a nutrition division, similar in every respect to the other divisions of our State Health Department.

SCHOOL - HEALTH COORDINATING SERVICE: As you know the School Health Coordinating Service had its beginning in 1939. In last year's report a statement was made concerning the purpose of the work, the cooperating agencies concerned, and the plan of procedure which has been followed. Through the collaboration of the Department of Public Instruction and the Department of Public Health in carrying out school health work, it is obvious and requires no argument as to its value. The attempt of these two groups to work together in North Carolina is unique and bids fair to bring success. Acknowledgment is hereby made to the Rockefeller Foundation and to the General Educa-

tion Board for generous financial aid and other support in this project.

In one county in-service teacher training in health instruction and physical education was given in 16 high schools and in 37 elementary schools. Every high school in the county set up a required program in health and physical education, consisting of three periods a week in physical education and two periods a week in health education. The subjects included nutrition, first aid, prevention of communicable diseases, personal hygiene and safety.

SUMMER TEACHER - TRAINING CONFERENCES: During the months of June, July and August, this service cooperated with four institutions in conducting Teacher Training classes and Child Health Conferences. The institutions were the Woman's College of the University of North Carolina at Greensboro, the University of North Carolina, Chapel Hill, and North Carolina College for Negroes at Durham and Bennett College for Negroes at Greensboro. The objectives included methods of teaching health, sources of materials for teaching health, health problems of children, an interpretation of school and community health problems, and an integration of academic subjects with the child health program. At four child health camps about 120 underprivileged children were studied and received three well-balanced meals daily, medical care, dental care and proper supervision.

A similar program has been carried out in the Negro schools of Durham by Negro members of the staff directed by our Dr. Walter J. Hughes. During the period of September, October, November and December 126 teachers, 1440 elementary school children, and 280 high school students were given physical examinations. The teachers and the high school students were given Wasserman tests and Tuberculin tests.

The scope of work which has been undertaken includes the giving of information to teachers in regard to screening out the children with physical defects. Emphasis has been made to the teachers that they should know the advantages of the home life of the children

under their care; the inspection of the buildings and grounds in respect to environmental sanitary facilities and requirements. It is obvious from these statements that the teacher occupies a key position in this field of activity.

PUBLIC HEALTH PUBLICITY: The need for a Publicity Specialist in the State Board of Health can only be appreciated when a review is made of our Scrap Book, to which approximately 150 pages of clippings have been added during the past year. This specialist conducts the Board's weekly broadcast over State WPTF, and answers various inquiries regarding research.

The newspapers of the State continue to give the Board of Health their full support, and the same is true of the news gathering associations, including the Associated Press and the United Press. Altogether the publicity work of the Board has been greatly accelerated during the past year, with definite objectives and of beneficial results.

Respectfully submitted,

Carl V. Reynolds, M. D.,

r/e Secretary and State Health Officer

DEPARTMENTAL REPORTS

DIVISION OF PREVENTIVE MEDICINE

Dr. G. M. Cooper, Director

Briefly speaking, there have been few changes in the work of this division during the current year, with the exception of the resignation of Dr. George K. Anderson, Pediatrician, and Dr. A. W. Makepeace, Obstetrician, specialist consultants who had been conducting the postgraduate work for physicians at Duke Medical School and Hospital and teaching in the University of North Carolina School of Public Health. The postgraduate work had to be discontinued for the duration on account of the inability of remaining physicians in civilian service to spare the time to attend. Doctors Makepeace and Anderson resigned to enter war work, one in the Navy and the other with the Research Council in Washington.

A great deal of difficulty has been manifested during the year in maintaining attendance

on the maternity and infancy clinics conducted in about seventy-five counties. This difficulty has been due to transportation troubles and to the scarcity of available physicians to conduct the clinics. Some of the clinics have been discontinued but most of them are still in operation. Many of the health officers are doing the work in such clinics heretofore done by practicing physicians, and in some instances nurses have been holding conferences. The clinics, however, continue to do a great deal of good in teaching the more than 20,000 pregnant women who are attended each year by midwives in this State, and also in reaching the mothers of such babies with information as to the care of the infants.

One proof of the effectiveness of this work as accumulated through the years is the fact that the maternal and infant death rates for 1942 reached the lowest point in the history of North Carolina, the maternal mortality rate dropping to a low of 3.4 as against 4.1 in 1941 per thousand live births, and the infant death rate dropping to a low of 47.5 per thousand live births, as against 59.4 the previous year.

The most important new work of the division for the year was the acceptance of the United States Children's Bureau offer to participate in a plan for extending obstetric and pediatric service to the wives and babies of men in the armed services of the country. Dr. Merl J. Carson, Pediatric Consultant, who came with the division on May 1, last year, to succeed Dr. Emmett Lupton, who had previously resigned, was assigned the duty of keeping up with the details of this work. The Children's Bureau allowed the division to budget some funds allotted to the State for the current year for this work. Satisfactory fees were arranged to pay for the services of home deliveries or hospital deliveries for private physicians. The service extended to privates and non-commissioned officers of all service men. Funds for this purpose were exhausted about the 8th of April. However, on March 18, 1943, Congress passed a new enabling act through the recommendation of its appropriations committees and made available

some new money through the Children's Bureau. Following a nationwide meeting in Washington on March 22 and 23 of all maternal and child health directors of the United States, in which the director of this division participated, plans for the expenditure of this money were formulated at this meeting in Washington. Definite instructions with interpretation of the law as laid down by Congress were given North Carolina. On return to the office, plans were worked out and submitted to Washington, and on April 9, telegraphic notice was received by the State Health Officer that these plans were approved with some minor exceptions, and that they were the first plans in the United States to be thus approved.

Up to April 8, authorizations with obligations to pay for the services either in the hospitals or the physicians' fees, or both, have been contracted for between eight hundred and one thousand women. The new law restricts aid to the privates and the lower ranks of the petty officers, excluding the higher grades of petty officers, such as staff or technical sergeant. On the whole, physicians have cooperated admirably with this plan, so far, and several of the hospitals of the State have cheerfully made sacrifices in order to aid the Board in extending this service.

CRIPPLED CHILDREN'S SERVICE:—Although the war situation has impeded the progress of this program by loss of personnel, by devolvement of extra responsibility on others, and, particularly, by reason of factors limiting personnel, facilities and services in relation to the needs of crippled children, we can report that no ground has been lost. The major goals of the program: (1) detection, location and referral, (2) classification and registration, and (3) provision of care and treatment have been effective for large numbers of crippled children.

Locating Services:—As of December 31, 1942, there were 20,228 crippled children on the State Register representing an approximate increase of 7% over the previous year—the same rate of increase prevailing in the last report.

Diagnostic Services:—There were 308 clinic sessions conducted during the year, at which 9,921 examinations were carried out, represented by 3,745 first admissions of children within the period, and 6,176 return visits of children. In addition there were 1,350 adults admitted for examination.

Treatment Services:—There was a total of 1,419 children under care in hospitals during the year, of whom 1,211 were treated and discharged.

DIVISION OF COUNTY HEALTH WORK

Dr. R. E. Fox, Director

The present fiscal year has seen the inauguration of whole-time health service in several new counties in North Carolina. In July 1942, health service was organized in Pasquotank County and Montgomery joined Anson County in a District Department. In January 1943, Perquimans County requested permission to join Pasquotank in a District Department. In March 1943, Scotland County began their full-time health program.

With the establishment of these services, public health work on a full-time basis now exists in eighty-seven of the one hundred counties in North Carolina and full-time health service continues to be maintained in six city health departments.

The past year has seen some changes in the administration of local health service which have been made in an attempt to partly compensate for the loss of medical personnel to the armed forces and for other changes brought about by the existing emergency. One district health department, consisting of two counties, lost its health officer to the army. Two adjoining counties (one of them already a district) divided the two counties and these two health officers are now doing the work of three. Halifax County was without the services of a health officer and effective July 1, 1942 was incorporated into a district with Edgecombe County, with the Edgecombe County Health Officer serving both counties.

While the number of counties operating under full-time health service has increased, there has been no increase in the number of

departments because of the policy of combining departments to offset the loss of medical personnel. There are still sixty-six whole-time health departments which include forty-three county units, seventeen district units, and six cities. The seventeen districts include forty-four counties, the size of the districts varying from two to five counties.

Four of the departments are headed by medical officers of the U. S. Public Health Service assigned to North Carolina. These are: Pasquotank-Perquimans District, Lenoir County, Richmond County and Scotland County. Epidemiologists assigned by the U. S. Public Health Service are serving in the following counties: Cumberland, New Hanover, Wayne, Durham and the Pasquotank-Perquimans District.

At the present time there are employed in the sixty county and district departments and four of the city health departments (exceptions Charlotte and Winston-Salem) a total of seven hundred and twenty-two full-time workers. Of this number sixty-four are health officers, five are assistant health officers, eight are epidemiologists, and four are dentists. There are fifteen supervisory nurses, one of which is an assistant supervisory nurse, and two hundred and ninety-seven staff nurses, or a total of three hundred and twelve public health nurses. There are one hundred and fifty-nine sanitation personnel and follow-up workers. Other personnel consists of sixteen laboratory technicians and one hundred and fifty-two clerical workers. The departments not employing full-time dentists have been provided with oral hygiene programs by the Division of Oral Hygiene of the North Carolina State Board of Health totaling thirteen hundred and seventy weeks of dental service.

Since July 1, 1942, there have been trained, or are now being trained, two health officers, seventeen public health nurses, ten sanitarians, one laboratory technician, three public health educators, or a total of thirty-three individuals. The training of these persons has been made possible through funds provided from Social Security, Reynolds Foundation, or Federal Venereal Disease Funds, and Maternity and Child

Health (Children's Bureau). This personnel has been trained in the school of Public Health, University of North Carolina, William and Mary College, the University of Iowa, George Peabody College, and Teacher's College, Columbia University.

All new personnel have been trained in the field training centers in the Orange-Person-Chatham District Health Department and the Durham City-County Health Department, and in addition to these, the Forsyth County Health Department, the Wake County Health Department, and the Greensboro City Health Department have been used for field training of nursing personnel.

In addition to this training, an orientation course for war emergency public health personnel was held at the State Board of Health for a period of two weeks. The orientation course classes began on January 4, 1943 and ended on January 16. Following the classes held at the State Board of Health, each worker received field orientation work for a period of four weeks, from January 18 to February 13. This orientation work was given to one health officer, fifteen public health nurses, six sanitarians, and one follow-up worker.

The organization and administration of this course was the responsibility of the Division of County Health Work, although the entire staff of the State Board of Health, as well as the faculty of the School of Public Health, University of North Carolina, cooperated with the U. S. Public Health Service in giving the lecture part of this training.

On May 25, 1942, Dr. Robert F. Young, former health officer of Halifax County, joined the staff of the Division of County Health Work as Senior Public Health Physician.

Mr. James M. Jarrett, Consultant in Sanitary Engineering, resigned on November 14, 1942 to accept a commission with the U. S. Public Health Service. Mr. James A. Westbrook, former Sanitary Engineer with the Orange-Person-Chatham Health District, replaced him as consultant in Sanitary Engineering on November 16, 1942.

On July 1, 1942, Mrs. Louise P. East, formerly employed as supervisory nurse in

Halifax County, joined the staff as a consultant in Public Health Nursing. Mrs. East spent the month of June at the University of St. Louis studying industrial nursing. Miss Anne Lamb, former supervisor in Robeson County, was added to our staff as a Consultant in Public Health Nursing on September 9, 1942. On October 31, 1942, Miss Theodosia Flud resigned from our nursing staff and was replaced by Miss Mary Louise Hewitt on November 9, 1942. Miss Hewitt had been supervisory nurse in the Rutherford-Polk District.

The supplemental health activities in war defense areas have been continued during the past year under the direction of Dr. I. Roy Hege who is on loan to us from the Forsyth-Stokes-Yadkin-Davie District Health Department. Working under his direction in the Moore, Cumberland, New Hanover, Lenoir, Pasquotank-Perquimans, Onslow-Pender, Richmond, Scotland, Craven, Granville, Durham, Union, Robeson and Wayne Departments have been eleven physicians, twenty-three nurses, five sanitary engineers, fifteen sanitarians, one follow-up worker, three bacteriologists, three educational consultants, and six clerical workers. Of the eleven physicians, ten were assigned by the U. S. Public Health Service; of the twenty-three nurses, seven were assigned by the U. S. Public Health Service; of the twenty sanitation personnel, four were assigned by the U. S. Public Health Service; two of the three bacteriologists and all of the educational consultants were assigned by the Public Health Service.

During the maneuvers held in North Carolina in July, August and September 1942, Doctor Hege was in charge of public health activities in the eleven counties of North Carolina embraced in the maneuver area and personnel from this emergency organization was assigned to supplement existing personnel in the counties on medical, nursing, and sanitation problems. A district headquarters was set up in Wadesboro, North Carolina, for the duration of the maneuver period. These activities were carried on in Cabarrus, Lee, Scotland, Hoke, Richmond, Mecklenburg, Moore, Mont-

gomery, Anson, Union and Stanly Counties. We are glad to report that no outbreak of any communicable disease arose which could be attributed to the influx of soldiers or visitors.

A consolidation of the field visits made by the staff of the Division of County Health Work, rendering consultative and advisory service, during the period January 1, 1942 to December 31, 1942, reveals the following: 85 visits made by the director to counties having full-time health service; 53 visits made by the Senior Public Health Physician; 57 visits made by the Consultants in Sanitary Engineering; 346 made by the Consultants in Public Health Nursing; and 66 visits made by our Field Representative, giving a total of 607 visits made by the Director and Consultants of the Division of County Health Work during the calendar year 1942.

DIVISION OF EPIDEMIOLOGY

Dr. J. C. Knox, Director

General:—During this report year the usual routine activities of the Division of Epidemiology were carried on. The service to the public of this and other states in providing information and instructions relative to the North Carolina premarital examination law continued to expand its scope, especially as the military forces in North Carolina areas continued to increase. A clerical activity of the Division is the routing of serologic blood test reports on selectees in North Carolina to the Public Health Service by which an over-all compilation is made by the Service with complete breakdown of statistical data.

Venereal Disease Control Unit:—As this report year began, Dr. Ralph J. Sykes, Venereal Disease Consultant for the Division of Epidemiology, was ordered into active military service, thus leaving the Division with one venereal disease consultant. Doctor Sykes' position remains unfilled. Trained venereologists were added to the staffs of the health departments in Durham, Wilmington, Goldsboro, and Elizabeth City. There are a total of 309 venereal disease clinics with 414 clinic sessions held weekly.

During this report this Division distributed venereal disease drugs in the amount of \$6,508.34 to private physicians of North Carolina for treatment of patients. These drugs were distributed without charge, physicians submitting records to us. Clinic services are now available to approximately 95 per cent of the population of North Carolina. The venereal disease control program in this State continues to emphasize the importance of the epidemiological approach and local personnel are instructed in the technique of securing such data.

Early in this report year the State Health Officer requested all local health officers to change their method of certifying food handlers in order to prevent the use of food handling certificates by prostitutes as a badge of cleanliness.

A large portion of our venereal disease control effort continues to be expended in the vicinity of military areas, the number of which is constantly increasing.

In this period there has been a greater increase in the attention given to the control of gonorrhea. Culture techniques have been introduced into five field laboratories under the guidance and assistance of a trained bacteriologist loaned to the State by the Public Health Service. The number of cases admitted to the clinics increased 66 per cent during this report period. Part of this increase was undoubtedly due to one of the educational activities of the period. During the early part of 1942 Dr. Percy S. Pelouze made a tour of North Carolina, holding a two-day session on gonorrhea control for the medical profession throughout the State. In June 1942 a three-day institute on venereal disease control for health officers was held at Chapel Hill. In addition to our local venereal disease control personnel, the course was fortunate in having Dr. Gurney Clark of Johns Hopkins, and Dr. Nels Nelson of the Maryland State Board of Health. Following this a three-weeks' course in the epidemiology of venereal disease was held at Chapel Hill for public health nurses. This course was attended by forty North Carolina nurses and ten out-of-State nurses

and has proved to be a very important improvement in our local epidemiology work.

Late in 1942 a joint State-Federal project for the production and evaluation of venereal disease educational materials was set up in Raleigh under the direction of Mr. Capus Wavnick. This project is now producing posters, especially for the armed forces, but also for civilian use. Another health education activity which gives considerable promise is the production of two film strips for use in waiting rooms in venereal disease clinics.

The two venereal disease research programs are continuing under the direction of Drs. W. L. Fleming and John J. Wright.

Central Tabulating Unit:—The Unit has performed the same services to the venereal disease clinics with increased efficiency. It has been possible to make some special studies for the clinics and other persons interested in venereal and communicable disease problems. Statistics showing the number of serologic tests made for January and February 1943 have been prepared for the State Laboratory of Hygiene, which includes the results of tests by age distribution, by occupation, sex and color, and purpose for which test was made. The Central Tabulating Unit received reports of 15,151* new untreated syphilis cases for the year. Private physicians, hospitals and other institutions reported 2,536* new untreated syphilis cases. During this period an average of 24,606* patients per month attended public clinics for treatment or clinical aid for syphilis. This year the clinics administered 822,769 treatments for syphilis. Central Tabulating Unit counties reported 7,617* new untreated cases of gonorrhea and chancroid. Private physicians, hospitals and other institutions report 4,141 new untreated cases of gonorrhea.

Malaria Investigation and Control Unit:—During the report year the Unit has changed some of its policies. For example, instead of taking county-wide blood slide surveys, these surveys are confined to areas around military camps. The staff is largely devoting its time to malaria control in the war areas.

*Figures were estimated for March and April 1943.

In this year a total of 23,942 malaria blood slides was taken in 15 counties.

In cooperation with the U. S. Public Health Service the war areas malaria program now has over 350 people employed on its program and is working in 15 counties. Thirty-one trucks and six automobiles are supplied by the U. S. Public Health Service. Expenses for the year for supplies and equipment total about \$18,000 and for salaries and travel \$148,800.

Endemic Typhus Fever Control Unit:—The Typhus Fever Control Unit is operated as in the past, with some additional help. An Assistant to the engineer has been added because of the demands for help by local communities in the control of rats. The Unit acts in an advisory and supervisory capacity by making detailed surveys, cost estimated for rat proofing and vent stoppage programs and for baiting and poisoning rats. During the year there has been a greater interest in this program than evidenced in the years before. All the costs for these programs, with the exception of supervisory and advisory services of members from the State Board of Health, are borne by the local communities.

Rat stoppage work has been completed in the business areas of Wilson, Clinton, Oxford, Laurinburg, Snow Hill, and Bladenboro with a total of 520 units completed and a total cost of \$4708.22 for labor and materials.

Also during this report period, 17 poisoning campaigns were conducted with a total cost of \$5195.82 for labor, materials and red squill, and a total of 20,512 properties serviced.

The total number of units surveyed in Raleigh and New Bern was 547 with a total cost of \$1867.07 for materials.

Community Health Education:—In September 1941, the State Board of Health in cooperation with the U. S. Public Health Service and the Cumberland County Health Department began the first of a series of demonstrations in community health education. Since that time programs have been developed in Robeson, New Hanover, Craven, Carteret, Wayne, Lenoir, and Richmond Counties.

Through these demonstrations an attempt has been made to reach every individual in

the community and to take to the members of the community the special kind of health information that will be most useful to them in helping solve the health problems and conditions that have been made more acute by the exigencies of war.

Each community has been organized by the block plan, which only recently was adopted by the Office of Civilian Defense and is now being used in every community throughout the nation.

Programs of study on venereal disease, nutrition, tuberculosis, typhus fever, sanitation, immunization, respiratory infections, and a host of others have been carried to the people through the block organization. Surveys have been made, courses for food handlers have been held, volunteers have been recruited for assistance at overcrowded clinics, classes in home nursing and first aid have been stimulated, and health movies have been shown to thousands.

During a six months' period community health education programs in five counties were responsible for the following: 772 meetings with 51,034 persons in attendance; 465 news releases; 129 radio broadcasts; 1972 conferences with individuals; and the distribution of 137,760 leaflets.

Health Education Consultants were loaned by the U. S. Public Health Service to the N. C. State Board of Health to develop these programs, but these workers will soon be replaced by young women from North Carolina who have been trained in public health and public health education at the School of Public Health, University of North Carolina. This training was made possible by grants by the State Board of Health.

To meet the tremendous demand for well-qualified health education personnel needed in many state and local health departments, the W. K. Kellogg Foundation recently granted twenty fellowships to the U. S. Public Health Service for training health educators. The School of Public Health at Chapel Hill was selected as this national training center largely because field work and "internships" in health education will be given in the counties where

the community health education demonstrations are being held.

FIELD EPIDEMIOLOGICAL STUDY OF SYPHILIS

Dr. John J. Wright, Director

This study was set up for the purpose of determining the effect of the syphilis control program, in the area under study, on the attack rate of syphilis, and to evaluate the various methods of epidemiological approach to the disease.

The staff of the study consists of a director, two nurses, and two statistical clerks. One nurse and clerk are assigned to the Orange, Chatham, Person Health District; the other nurse and clerk to the Durham City-County area. Headquarters for the study is in the School of Public Health of the University of North Carolina in Chapel Hill. A small portion of the time of the nurse and director is used in teaching students of Public Health in the school. Each nurse acts as Assistant Supervising Nurse in charge of Venereal Disease Control in her district.

Records are kept of all serological tests for syphilis on all bloods submitted to the laboratories by clinics and physicians. A case register of all cases newly discovered by physicians and clinics is kept each year to determine the annual discovery and incidence rates of the disease. The prevalence rate of the disease is determined from the serological register. A study of the changes in the prevalence rate of syphilis among the selective service groups is being made, these changes over a long period being an index of the effectiveness of the control measures.

A study of the prevalence of syphilis among pregnant women as an index of prevalence in the study area is made from examination of birth certificates and checking of these certificates against the serological register. It is felt that the physiological selection by pregnancy will give a true cross sectional sample of all economic and social strata.

Each patient is interviewed for contacts and a study of the most effective methods of getting these contacts examined is being made.

The epidemiological approach and persuasive methods are being stressed. The education of the patient by the unspecialized as well as by the specialized worker in syphilis is being evaluated by a study of the lapse in treatment rate of all patients in the clinics.

The education of the staffs in the clinics is being undertaken by the director and nursing staff. This education consists of special lectures, demonstrations, and experience under supervision. The biggest hole in the entire control program was found to be actual ignorance of and indifference to the problem (the latter probably due to the former) on the part of the nursing and clinical staffs of the health departments. To improve the quality of diagnostic, treatment, and epidemiological procedure in the clinics all over the State, Dr. William Fleming began a series of intensive short courses for the medical personnel of the clinics throughout the State as well as for private physicians—but the war situation with its shortage of doctors made postponement of this effort advisable. The use of Public Health personnel by the private physician for contact investigation and delinquent follow-up is being stimulated.

The nurse in the Durham area interviews all soldiers hospitalized for syphilis and gonorrhea at Camp Butner. We are particularly interested in rendering this service as part of our study since it gives us a lead to the spots where the soldiers are contracting their venereal diseases, as these are bound to be the same spots where the civilians are getting theirs. We keep an epidemiological register of all the places mentioned by these soldiers either as a place of procurement or where the actual contact occurred.

ACTIVITIES OF THE REYNOLDS RESEARCH LABORATORY

Dr. Wm. L. Fleming, Director

1. Nurses' Course, June-July 1942.

A course in "Venereal Diseases and Their Control" for public health nursing supervisors and senior staff nurses was given under the director's direction at the School of Public Health June 22 through July 11, 1942. Regis-

tration was limited to 50 in order to facilitate the most effective teaching. Forty of the places in the course were reserved for and filled by nurses from North Carolina health departments. A full registration was obtained with many applications having to be declined. The course was generally regarded as being quite successful.

2. Health Officers' Institute.

An "Institute in Venereal Disease Control" for the health officers of North Carolina was arranged by the director and conducted in Chapel Hill July 8th, 9th and 10th, 1942. Fifty-two health officers and venereal disease control officers were in attendance. It was generally regarded as having accomplished its purpose.

3. Refresher courses for part-time clinicians.

Three five-day intensive courses in Venereal Disease Control were conducted by the director in August and September, 1942, for private physicians working part-time in North Carolina health department venereal disease clinics. These courses were conducted in the Venereal Disease Clinic at the Durham Health Department. Nine physicians, six white and three colored, attended these courses. It was felt that considering the shortage of doctors in the State and other adverse factors, the courses were successful.

4. Laboratory Research.

Research on immunity in syphilis and the relationship between strains of *T. pallidum* isolated from different patients has been continued. Some work has also been done on a possible treatment resistant strain of *T. pallidum*. However, this regular research work of the laboratory has been interrupted temporarily by work on the government research contract described in the next paragraph.

5. Research for the National Research Council.

At the request of the Subcommittee on Venereal Diseases of the National Research Council, an extensive research program was instituted soon after January 1, 1943, on "the relative efficacy in syphilis prophylaxis of ointments containing calomel in different particle size." Also at the request of this Subcommittee,

a government research contract for this problem was applied for and obtained. This contract pays for part of the expenses of conducting this investigation. A very large animal experiment has been set up which has taken most of the director's time since January, 1, 1943.

6. Sending out specimens of syphilis spirochaetes.

In conjunction with Dr. Robert D. Wright of the Division of Epidemiology, specimens of tissue emulsion from infected rabbits containing numerous syphilis spirochaetes have been mailed out several times to all of the clinics in the State which were properly equipped for dark field examination. This serves the purpose of investigating the efficacy of delayed dark field examination of syphilitic material and possible ways to improve it, and also provides the smaller clinics with an opportunity to renew periodically their acquaintance with the characteristics of *T. pallidum*. This work has already provided some interesting results and will be continued.

7. Ducrey antigen.

Several of the larger clinics in the State are now being furnished with Ducrey antigen made in this laboratory for use in performing skin tests for chancroid.

8. Gonococcus cultures.

During most of the year cultures for diagnosis and treatment check of gonorrhea have been performed in the laboratory for the Durham Health Department Venereal Disease Clinic. This service has recently had to be discontinued, but the Durham Health Department should soon be in a position to do their own gonorrhea cultures.

9. School of Public Health Work.

In connection with his position on the staff of the school of Public Health, University of North Carolina, the director has taught the following classes in venereal disease control:

- (a) Public health doctors, fall term
- (b) Special group of army physicians, fall term.
- (c) Public health nurses, fall term
- (d) Public health doctors, winter term.
- (e) Public health nurses, winter term.

STATE LABORATORY OF HYGIENE

Dr. John H. Hamilton, Director

Since the State Laboratory of Hygiene has been occupying its new plant for more than three years, it is now possible for us to render a fairly accurate accounting of our stewardship.

The most universal yardstick is the financial one with dollars and cents being the units of measure. Although we had devoted considerable study to operating costs under theoretical but unknown conditions, it is definitely reassuring to find that in actual experience our cost estimates contained no gross errors. Actual operating costs for the first fiscal period increased only 10.1 percent whereas the volume of work performed increased at least 34%.

The fundamental purpose of the laboratory is, of course, to render service. In the new plant we have been able to render service which could not have been performed in our old plant. We have also been able to perform a greater volume of work than would have been possible without additional space. During 1942, 692,231 examinations were made on specimens sent to the laboratory. For 1941 the comparable number was 575,312.

Serological tests for syphilis still comprise the principal load of the laboratory so far as specimens are concerned. In 1942 there were 613,251 serological tests for syphilis compared with 485,243 in 1941. In 1942, 379,185 of these were from civilians and in 1941, 427,488. In 1942 there were 216,066 tests for the Selective Service System and in 1941, 57,755 from this source. We have made no statistical study of the specimens originating from the Selective Service System, since this work is being done by the U. S. Public Health Service. From civilian sources, however, punch cards are being made for each specimen. Tabulations indicate 11.5% of all specimens are reported as giving positive reactions. The positive reports by race and sex are: white male—6.9%; white female—4.2%; negro male—22.1%; negro female—18.9%; others or unidentified—9.9%.

Each year the laboratory participates in the evaluation studies for serological tests for

syphilis which are conducted by the Advisory Committee of the U. S. Public Health Service. In 1942 our Kline tests had a sensitivity rating of 84.8%—the control laboratory a rating of 83.1%. Our specificity rating in the Kline tests was 99.2%—the control laboratory 100%. Our Wassermann, the Eagle Complement Fixation Test, had a sensitivity rating of 80.3% and a specificity rating of 99.6%. The control laboratory had a sensitivity rating of 84.9% and a specificity rating of 98.8%. It is apparent, therefore, that our serological laboratory made a satisfactory showing in this evaluation study.

We have continued our supervision of the North Carolina laboratories which have been approved or which have applied for approval for the making of serological tests for syphilis under the State Marriage Law. Due to a shortage of technicians we have discontinued temporarily the sending of specimens of pooled sera to these laboratories. We have, however, been able to send a representative of our laboratory to each of the local laboratories which have applied for certificate of approval. Our representative has inspected the quarters and equipment of these local laboratories and has attempted to appraise the training, experience and technical skill of the laboratory workers who are actually performing these serological tests. Some of the information included in a comprehensive report of this study is as given below:

Quarters & Equipment	No. of Labs.	Condition		
		Good	Fair	Poor
Space	67	41	13	13
Light	67	48	13	6
Glassware	67	40	19	8
Centrifuge	67	51	10	6
Microscope	67	65	1	1
Darkfield Attachment	29	29		
Electrically Controlled				
Water Bath	45	44	1	
Shaking or Rotating				
Machine	24	24		
Refrigerator	44	44		
Refrigerator Facilities	18	1	10	8
Sink	62	50	8	4
Sterilizing Facilities	62	55	5	2
Cleanliness	67	33	23	11

Although war-time is a poor time for reform we feel that we have both an opportunity and a responsibility for improving local laboratory service. We feel that with the coming of peace we can, with patient planning, exert a helpful influence in the development of more adequate local laboratory service.

During the year 1942 we received 774 animal heads to be examined for rabies. Of these 197 showed positive evidence of rabies. Microscopic examinations showed Negri Bodies as follows: Dogs, 169; cats, 13; cows, 4; foxes, 2; mule, 1; pig, 1. We have continued to make mouse inoculations of brain material from all animals suspected of rabies and having a history of biting a human when we are unable to find typical Negri Bodies on microscopic examination. During 1942 mouse inoculation established the diagnosis of rabies in eight instances where the microscopic examination was Negative. In 1942 we distributed 530 complete antirabic treatments. Up to the present time we have received no reports of accidents of antirabic treatment attributable to the vaccine which we have prepared according to the Sample Method. One failure to protect has been reported but the diagnosis was not confirmed by laboratory examination.

Early in 1942 we lost to the military service the parasitologist who had been assigned to us by the National Youth Administration. Such work as we have been able to do in this field has of necessity been carried on by the group making our other microscopic examinations.

The Special Blood Culture outfits which were developed in our laboratory have continued to prove satisfactory and have increased in popularity.

From public and private water supplies we received and examined 7,086 specimens during the calendar year 1942. In 1941 there were 7,152 specimens sent in.

Demands upon the laboratory for typhoid vaccine increased markedly during 1942 when 891,164 cc were distributed as compared to 629,767 cc in 1941. During the year there has been a marked trend toward the policy of administering one booster dose of typhoid

vaccine each year to those who have previously had a complete course of three doses. Since it is generally established that the administration of a booster dose each year will give a uniformly higher degree of protection than the previous method of administering three doses every three years, this practice should further decrease the instances of failure of the vaccine to protect. It would also decrease the amount of vaccine which the laboratory would be required to prepare and distribute in order to protect the same number of people who are now being protected by our product. If this booster dose is given intra-dermically, 1/10 cc will accomplish its purpose quite as effectively and with less reaction than when the booster dose is given as 5/10 cc subcutaneously.

Last year we reported an increase in the use of smallpox vaccine. This year we report a further increase—325,777 doses of smallpox vaccine were distributed in 1942 as compared with 277,349 in 1941.

It is gratifying to recount that our Improved Pertussis Vaccine is increasing in popularity, although there is not nearly as much of it being used as we feel should be used. In 1942, 44,040 cc were distributed as compared with 41,470 in 1941. As in the previous year most of that which we have distributed has gone to the same physicians who ordered it the previous year—thus indicating that their experience shows that our Improved Pertussis Vaccine is effective in controlling Whooping Cough.

The amount of Diphtheria Toxoid distributed in 1942 was 160,367 cc as compared with 146,314 cc for 1941. The combined Diphtheria and Tetanus Toxoid distributed in 1942 was only 3,770 cc. One thousand cc of Tetanus Toxoid were distributed. There was little increase in the amount of Diphtheria Antitoxin distributed in 1942.

In our report to the last Conjoint Session we mentioned that a Nutrition Laboratory had been installed and equipped. For the past several months this laboratory has been a definite part of the Nutrition Survey being conducted in North Carolina under the direction

of Dr. D. F. Milam. During this time our Nutrition laboratory has studied 927 specimens of blood from the following sources: Wayne County survey—White, 292; Negro, 335; National Youth Administration Center, Rocky Mount, 111; Personnel of the State Board of Health 89. The following are routine examinations on each specimen: Red Cell Count, Hematocrit, Hemoglobin, Total Protein, Albumin, Carotene, Vitamin C and Vitamin A.

For Wayne County Survey Dr. Milam has given us the following summary:—"On the laboratory side the following findings are of interest: the average plasma vitamin C levels in both white and colored races are within what is considered a normal range; but 38 percent of white and 52 percent of colored individuals examined last summer and fall were at levels considered definitely subnormal and indicating a great deficiency in the intake of this vitamin. As regards vitamin A, 27 percent of each race showed plasma levels below the accepted normal. Blood proteins were normal in nearly all individuals indicating very little or no protein shortage in this area. Hematology studies revealed a widespread anemia of slight degree and of a hypochromic microcytic variety. Seventy percent of the white population and 80 percent of the colored had hemoglobin levels under 90 percent and of this 6 percent of the white and 26 percent of the colored had levels under 75 percent normal, most marked in the younger age groups and in the female sex."

In Doctor Milam's opinion—"The dietary study's part of the survey has given a very clear picture of such nutritional deficiencies as exist in the rural population of this county. This is data on which an improvement program can well be based."

Another investigation has been conducted in the laboratory during the past several months which we think will make a definite contribution to public health laboratory service. The object of this investigation is to develop a satisfactory method for sending through the mails of cultural material from patients either having or suspected of having

gonorrhea. In the past gonococcus culture as an aid to diagnosis or as a check on treatment has been limited entirely to those communities having competent local laboratory service. The progress in this work to date indicates that we have developed a method which will make possible the sending of material for delayed culture and that the delayed culture will be satisfactory in comparison with the methods used for immediate culture. It will take more study, however, before we feel justified in extending this service to all parts of the State.

During the past year we have had to curtail somewhat our policy for the training of our laboratory personnel — only one scholarship having been available to the laboratory for the past academic year. The fellow this year has been studying the Spectograph and its adaptability to the chemical analysis of water. At the present time a number of the members of our staff are taking a course in bacteriology offered by an experienced teacher of bacteriology who is a member of our staff.

Our principal difficulty during the past year has been loss of personnel—10 members of our staff having joined some branch of the military service—5 having resigned to accept better positions; six having resigned for other reasons and three having retired.

A Compensation Plan for our laboratory personnel has been adopted by our Merit System Council. It would be helpful if this plan could be put in actual operation, since it would offer some hope of advancement to the loyal members of our staff.

The keenest disappointment of the year has been our inability to develop a library. A suitable room for a library was set aside in the central building of the State Laboratory of Hygiene. In this room have been brought the books and journals of the Chas. O'H. Laughinghouse Library, the State Board of Health and the State Laboratory of Hygiene. This room has been equipped with shelves and a considerable amount of library furniture. Only the services of a trained librarian are needed to convert this book room into a library which could render valuable service, not only to the

staff of the State Board of Health, but to the health workers and physicians throughout the State.

As for the future the laboratory has no long term plans. It is attempting to do each day's work on the day when that work should be done and to do that work better today than it was done yesterday. The staff has continued to manifest its devotion to duty and its willingness to serve with its hands, with its money and with its lives that the world of tomorrow may be a better world in which to live.

DIVISION OF VITAL STATISTICS

Dr. R. T. Stimpson, Director

The number of fatal illnesses in North Carolina for 1942 compared favorably with the record of previous years. The death rate from all causes was the lowest for any year since the beginning of registration in 1913. A number of specific diseases showed significant gains. There were more births than for any year for which there are records.

The 90,056 births reported as having occurred in 1942 outnumbered the 29,613 deaths recorded by 70,443. This represents the greatest natural increase ever shown during any year. There were 2,541 fewer deaths than for 1941, fewer than for any year since 1921. The death rate was 8.1 per 1000 population in comparison with a rate of 8.9 for 1941.

A more detailed study of the tabulations of specific causes of death shows that there were decreases in the number of deaths from many infectious diseases. Deaths from such causes as heart diseases, nephritis, and cancer either increased or showed no significant change.

Among the conditions accounting for fewer deaths in 1942 than in 1941 was typhoid fever. There were 21 deaths from this disease last year compared to 32 in 1941, and 39 in 1940. This represents only 11 fewer deaths than in 1941; but when considered in relation to the total number of typhoid deaths, it represents more than a 34 percent decrease and is a continuation of the downward trend toward the goal of complete eradication. There has been a 70 percent decrease since 1938.

There were 1,578 deaths from all forms of tuberculosis in 1942 compared to 1,769 in 1941, or a decrease of 191 deaths, representing a decrease in the rate from 48.8 per 100,000 population to 43.0. There were no deaths from smallpox; 55 deaths from measles compared to 99 in 1941; 99 whooping cough deaths compared to 199 the previous year; 70 diphtheria deaths in 1942 and 89 in 1941; 110 pellagra deaths to 139 the year before; and 464 deaths from diarrhea and enteritis under two compared to 692 in 1941.

The fewer number of deaths charged to influenza and pneumonia was a continuation of the downward trend begun in 1938. Last year there were 296 influenza and 1,677 pneumonia fatalities. For influenza this represents 606 fewer than in 1941. There were 219 fewer deaths from all forms of pneumonia in 1942 than in 1941, 364 fewer than in 1940, and 426 fewer than in 1939.

Both infant and maternal mortality showed decreases in number of deaths and in mortality rates. There were 5,073 infant deaths in 1941 and 4,281 in 1942, or 792 fewer deaths among infants. There were 308 puerperal deaths in 1942 compared to 354 in 1941.

Among the diseases accounting for an increased number of deaths in 1942 were cancer with 2,219 in 1942 compared to 2,056 in 1941. There were 4 more malaria deaths and 5 more deaths from diabetes mellitus than for the year before. There was an increase in endemic typhus fever deaths from 4 to 10.

The number of requests for certified copies of certificates of birth, and verifications of age, parentage, and place of birth, on the increase for a few years, continued to increase during 1942. These certificates are required for proof of citizenship in seeking employment in war industries, and for voluntary enlistment in the armed forces; for proof of dependency in applying for an allotment under the Servicemen's Dependency Act; for securing ration books; and for numerous other purposes. In addition to registering the regular birth and death certificates, over 75,000 delayed certificates of birth were filed with the Division of Vital Statistics in 1942. The Division was

fortunate in being able to secure WPA assistance to aid in carrying on this work.

DIVISION OF SANITARY ENGINEERING

Mr. Warren H. Booker, Director

The Division of Sanitary Engineering, although handicapped seriously by the loss of valuable trained and experienced personnel which could not be replaced because of emergency conditions existing at this time, has taken advantage of every opportunity during the past year to promote sanitation and to improve health conditions throughout the entire State. Because of existing world conditions, the need for laborers in defense activities, and the shortage of materials, virtually all projects formerly operated by the Works Projects Administration in North Carolina have been closed during the past year.

Largely through the promotional work of the engineers of this Division and through the aid from Federal grants and financing by the WPA, 20 towns and sanitary districts installed new water systems and new treatment plants, or have them under construction at this time. Likewise, 14 towns installed new sewer systems, and 12 towns, or sanitary districts, have either installed or have under construction new sewage treatment plants during the period ending March 31, 1943. In addition to constructing these entirely new plants and systems, the value and benefits of over 300 existing water works and sewerage systems have been materially increased through the extension of existing water and sewer mains, thereby providing safe and adequate water supplies and modern waste disposal facilities to many thousands of homes which formerly used questionable private water supplies and privies.

A list of public works improvements of permanent public health value that have either been completed or brought under construction between April 1, 1942, and March 31, 1943, is given below:

NEW WATER SYSTEMS AND PLANTS

- | | |
|---------------|--------------------|
| 1. Bailey | 3. Boiling Springs |
| 2. Battleboro | 4. Booneville |

- | | |
|------------------|-----------------|
| 5. Bonnie Boone | 13. Manteo |
| 6. Cleveland | 14. Pineville |
| 7. Elkin* | 15. Seaboard |
| 8. Fayetteville* | 16. Spring Lake |
| 9. Granite Falls | 17. Walstonburg |
| 10. Holly Ridge | 18. Waxhaw |
| 11. Hot Springs | 19. Wilmington* |
| 12. Jacksonville | 20. Woodland |

NEW SEWERAGE SYSTEMS

- | | |
|--------------------|-----------------|
| 1. Bailey | 8. Hot Springs |
| 2. Battleboro | 9. Lilesville |
| 3. Boiling Springs | 10. Pineville |
| 4. Bonnie Boone | 11. Seaboard |
| 5. Booneville* | 12. Spring Lake |
| 6. Carolina Beach | 13. Walstonburg |
| 7. Holly Ridge | 14. Waxhaw |

NEW SEWAGE TREATMENT PLANTS

- | | |
|--------------------|-------------------|
| 1. Bailey | 8. Seaboard |
| 2. Battleboro | 9. Spring Lake |
| 3. Boiling Springs | 10. Walstonburg |
| 4. Boone | 11. Waxhaw |
| 5. Holly Ridge | 12. Country Club |
| 6. Jacksonville* | Estates, Winston- |
| 7. Kings Mountain | Salem, N. C. |

*Under construction March 31, 1943.

Many towns that have suffered severe impact as a result of war and defense activities have obtained sizeable grants and loans under the Lanham Act, or Community Facilities Bill, with which to extend water and sewer systems and to provide more adequate water and sewage treatment facilities. This list includes Fayetteville, Wilmington, New Bern, Bonnie Boone, Spring Lake, Jacksonville, Holly Ridge, Swansboro, Goldsboro, and others at which projects for the expansion and improvements of water and sewerage systems have either been completed, or projects are now under way.

With the continued increase in defense work, other municipalities in strategic areas are now eligible for assistance under the Lanham Act and every effort is being made to get each city that is affected to take advantage of this program.

During the period from April 1, 1942, to March 31, 1943, the mutual aid plan for water works was placed in operation. Mutual

aid plan inventories of materials were compiled by all municipal water works desiring to participate in the program. The Division of Sanitary Engineering acting as a clearing house for the information contained in these inventories prepared and forwarded master inventories to each municipality participating in the mutual aid plan. These master inventories show the location, quantity, and kind of water works materials on hand.

In addition to promoting and directing the mutual aid plan, the division initiated the Ten Point Program for Emergency Preparedness for Water Works. Under this program, ten point program surveys have been conducted in 103 North Carolina cities and towns, resulting in many precautionary measures being instituted for the better protection of our public water supplies against sabotage and air raids. The reports also uncovered many deficiencies in the general operation and maintenance of water supplies which have been corrected to the extent that our public water supplies have been generally improved. This program has been, and will continue to be, conducted in close cooperation with the State and Federal office of Civilian Defense, which has already appointed the Director of the Division of Sanitary Engineering as State Water Coordinator and three of the Engineers as Assistant State Water Coordinators.

Even though the personnel of the Division has been greatly reduced, and numerous calls for extra activities have been placed upon the remaining employees, the inspection service has been maintained on its previous high level. During the period covered by this report over 1021 inspections of water and sewerage facilities were made and 33 sets of plans were reviewed by the Engineers of the Division. In addition to the foregoing, 22 FHA inspections were made and 537 FHA applications were reviewed and approved during the year.

In cooperation with the Department of Conservation and Development, a total of 1974 inspections of shellfish growing areas, oyster, and clam shucking and packing plants, and crabmeat packing houses were made by the Engineer in charge of Shellfish Sanitation.

During the past year there has been an ever increasing demand upon the activities of the District Sanitarians. The Sanitarians, under the supervision of Mr. M. M. Melvin, have conducted complete surveys of hotels, cafes, meat markets, and similar establishments in 46 counties and have made partial surveys in the remaining 54 counties. A total of 6914 inspections of hotels, cafes, meat markets, jails, state institutions, abattoirs, and similar places were made during these surveys. Because of the heavy influx of military and civilian population in the defense areas, it was necessary to concentrate the activities of the sanitation personnel in these areas.

In addition to the foregoing, the District Sanitarians have delivered numerous lectures to food handling groups and have taken an active part in conducting the orientation courses and field training courses for training emergency sanitation personnel. The Sanitarians have also rendered general supervision over the work of the County Sanitarians and have conducted much promotion work in connection with the general sanitation program.

The Bedding Unit, under the direction of Mr. A. L. Fleming, has made 3467 inspections of retail bedding places and manufacturing plants, which result in 3540 pieces of bedding being condemned and 3 violators prosecuted.

During the past year, the number of counties operating Community Sanitation projects decreased to three projects in January. Soon after January, these projects closed with the cessation of WPA activities in the State. With the closing of the WPA, promotion of community sanitation has been carried on by the local health units, through the use of private labor. For the period covered in this report, a total of 1872 privies has been completed. There was an average of 64 men working during the period.

The Milk Sanitation Program of the State Board of Health has been conducted under the general supervision of a part time Sanitary Engineer in charge of two district Milk Sanitarians. In addition to the State milk personnel, one public health Engineer and one Milk Specialist have been assigned to the State by the

U. S. Public Health Service. These men devote their entire time to milk sanitation in the defense areas. The U. S. Public Health Service also continued to assign the services of three Laboratory Technicians to the State to devote their entire time to the Mobile Milk Laboratory. The two regular Milk Sanitarians employed by the State Board of Health are devoting their time and efforts toward the improvement of methods used by dairies and plants throughout the State and are working with local health departments and city enforcement agents in promoting better enforcement of local milk ordinances.

The rapid expansion of military bases in North Carolina during the past year has greatly increased the milk sanitation activities. Every effort has been made by the State Board of Health to cooperate with the military authorities, the State Department of Agriculture, and local health departments in matters pertaining to the sanitation of the dairy industry. A total of 1824 dairy inspections and 350 pasteurization plant inspections has been made under this cooperative program. The U. S. Public Health Service Mobile Milk Laboratory has worked in 16 towns and 2 counties in the State, making 5706 bacterial plate counts and 389 phosphatase tests on milk supplies going to the military and civilian population. The Mobile Laboratory has also been of assistance in finding and correcting several major defects of operations found in many pasteurization plants in the State. Many major problems have entered the milk sanitation program. A critical shortage of Grade A milk exists in the State. Loss of trained personnel by pasteurization plants and the necessary overloading of milk plant equipment have created a potential hazard that may well result in epidemics of milk-borne diseases. In view of the intra-state and inter-state flow of milk during the present emergency, and the deterioration of local enforcement because of the loss of trained and competent milk sanitarians, it would appear that sufficient authority to enforce the public health control of all milk supplies should be vested in the State Board of Health.

For the past year the Malaria Control Drain-

age Program, including the number of projects under operation, decreased sharply until December 15, 1942, at which time all WPA assistance ceased. This reduction was caused largely by the expansion of defense activities throughout the State which greatly reduced the number of available laborers, thereby making it necessary for the WPA to close all of its activities. For the period from April 1, 1942, to December 15, 1942, a maximum of 392 men, one dredge, one drag line, and one truck were employed on Malaria Control drainage projects, and 22 miles of ditches and canals were dug, 830 acres of swamps were drained, and 50 acres of right-of-way cleared. The supervising personnel on the Malaria Control drainage program consisted of one Assistant State Director, who gave only a small part of his time to this work, and one full time District Supervisor. The Assistant State Director was not able to devote more than a small portion of his time to this program, since a major part of his time was utilized in conducting the cantonment larvicidal program in the defense areas and in cooperating with Army and Navy officials on Malaria Control on their reservations. A considerable amount of Malaria Control work has been done on Army, Marine, and Navy property; however, this work has not been included in this report since the work was paid for with Army and Navy funds. The purpose of this report is to show the work accomplished through the aid of WPA funds.

The following figures show the amount of money spent on Malaria Control drainage during the period from April 1, 1942, to December 15, 1942, at which time the program closed:

Spent by WPA	\$17,291.60
Spent by Sponsors	27,624.00
Spent by N. C. State Board of Health	1,662.85

The money shown spent by the State Board of Health on the foregoing tabulation was for technical supervision.

ACTIVITIES OF THE DIVISION OF SANITARY ENGINEERING

For the period April 1, 1942 through March 31, 1943:—

COMMUNITY SANITATION

No. privies completed with WPA labor	1,872
Average number of WPA laborers working	770
Percentage of concrete slab privies	100%
Percentage of privies painted	99.6%
No. of privy inspections	55

MALARIA CONTROL DRAINAGE WORK

No. acres of water surface drained	471
Average number of men working	392
No. of man hours of WPA labor working	40,729

MILK SANITATION

No. of dairy inspections	1,824
No. of pasteurization plant inspections	350

MUNICIPAL WATER

No. of municipal water plant inspections	585
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MUNICIPAL SEWERAGE

No. of municipal sewerage inspections	277
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PRIVATE WATER

No. of private water supply inspections	63
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PRIVATE SEWAGE

No. private sewage plant inspections	96
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FEDERAL HOUSING ADMINISTRATION

No. FHA inspections	22
No. FHA applications approved	537
No. investigations of FHA developments	4
No. defense housing development inspections	1

CAFE AND HOTEL SANITATION

No. cafe inspections	4,457
No. hotel inspections	341
No. cafe court cases	28
No. hotel court cases	1

SCHOOL SANITATION

No. school water and sewer inspections	83
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MEAT MARKET AND ABATTOIR

No. meat market inspections	1,972
No. abattoir inspections	47

JAIL SANITATION

No. jail inspections	14
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SHELLFISH SANITATION

No. shellfish inspections	1,974
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BEDDING

No. retail places inspected	979
No. manufacturing plants inspected	2,488
No. pieces of bedding condemned	3,540
No. waste dealer inspections	16
No. prosecutions	3

DIVISION OF ORAL HYGIENE

Dr. E. A. Branch, Director

While the staff of the Division of Oral Hygiene has been drawn on rather heavily for dentists to go into the war service, the educational part of the program is going on in its usual active way.

A significant achievement of the past year has been the publication of the "Mouth Health Catechism" prepared by this Division. This booklet is printed in two-tone color and is attractively illustrated. The purpose of the Catechism is to answer the questions usually asked by mothers concerning their own and their children's teeth. It is being distributed to mothers throughout the State, not only by the public health dentists, but also by the dentists in private practice who have been furnished with copies to give to interested parents. It is also being used in mothers' clubs and study groups. The first edition of this Catechism has been received most enthusiastically, as is evidenced by the many fine letters of praise and endorsement from the dental profession.

Another noteworthy development, in the field of health education, is the artistic arrangement, on the second floor of the Oral Hygiene Building, of mouth health exhibits in the form of "Little Jack's Fair." The children of the State are invited to visit this Health Fair, and many grades with their teachers have done so. When traveling conditions are again normal we predict that this will be one of the most noted and frequented places of interest for

children who come to the Capital City. In connection with the exhibit is a poster display which has been constructed by staff members and the children in the schools and which leaves no doubt as to the educational value of such health propaganda.

The number of counties participating in the dental program, the length of time spent in each county and the number of children worked for naturally show decreases on account of the decreased number of dentists on the staff. However, the reports show that through March of this school year 42,433 underprivileged children had the necessary dental corrections made for them by the school dentists and that an even greater number of privileged children were referred to dentists in private practice. In addition to the corrective work, the school dentists have taught mouth health to approximately 100,000 children in their own classrooms and have distributed to the teachers many thousands of sheets of the mouth health education material prepared by the educational consultant on the staff.

A study of the statistical reports of the Division of Oral Hygiene show that, during an average month, for the 5,000 children receiving dental corrections, it was necessary to extract only 200 six year molars. This is a very small number compared with the number that had to be extracted some years ago. Used as a measuring stick, this presents very convincing evidence of the effectiveness of our efforts in mouth health education.

During this same month the dentists filled 1,600 six year molars. Had it not been for this service provided for the underprivileged, these teeth, in all probability, would have been neglected and, eventually, lost. The fact that this tragedy—for the loss of a six year molar is a dental tragedy—has been averted for so many children should be very gratifying to us all.

The dental service is available to the preschool children of the underprivileged group if their mothers will take them to the schools. We are glad to report that more and more mothers are taking advantage of this opportunity each year. Many of the preschool chil-

dren are reached through the nursery schools.

A new feature of the dental program is that of making possible the extraction of diseased teeth for the patients in the prenatal clinics. This work is done by the local dentists at a fee concession. It is paid for from funds made available by the Children's Bureau of the Federal Government. This latter service is being accepted by more patients as time goes on, but there is still much suspicion and superstition to be overcome. This will gradually succumb as health education progresses.

The puppet show, now rounding out its eighth year in the schools, has stood the test of time. The school people recognize it as an outstanding educational activity and report to us that its teachings are carried over into the lives of the children, resulting in the establishment of many desirable habits.

In recognition of the unusual work that the Division of Oral Hygiene is doing, the Board of Directors of the Good Teeth Council for Children held its annual meeting in the Oral Hygiene Building on May first and second. This Board is made up of eminent physicians, dentists, nutritionists and educators. It was a privilege to meet this group of scientists who are interested in public health and to listen in on their discussions and deliberations. They were outspoken in their praise of the achievements in the field of mouth health education of our Oral Hygiene Division.

DIVISION OF INDUSTRIAL HYGIENE

Dr. T. F. Vestal, Director

MEDICAL ACTIVITIES—The twenty-ninth Biennial Report included the activities of the Division up to July 1, 1942. This summary begins there and includes the month of April, 1943—making a total of only ten months. This fact should be kept in mind when comparison is made with the reports of other years.

At the beginning of this ten months' period we were starting, by special request, a new activity. The Durham Health Department requested us to make a tuberculosis survey in the leading industries of the city of Durham. The Tuberculosis Control Division of the U. S.

Public Health Service had loaned us one of their miniature photofluorographic units for experimental use in the examination of employees of the dusty trades. This experiment had just been completed. Permission was obtained to retain this unit, including its personnel consisting of a physician and a technician, for tuberculosis case finding work. With this unit the Durham study was carried out, assisted by our own personnel, as time and conditions permitted. Nine thousand employees were examined in the initial study. One hundred and eighty cases of tuberculosis were found. Approximately half of this number appeared to be active from the X-ray standpoint. A goodly number of the remaining half were thought to be suspicious of active disease, and deserving of further study by local physicians and health authorities. Approximately sixty percent of the cases were in the minimal stage. A much smaller number were far advanced—some with cavitation—but continued to work in industry. Employees in industry in three other counties, four in all, have since been studied. The unit is now operating in a fifth county, and at this time is in one of the largest industries of the State. Requests for this service continue to come in from all over the State. Requests are now on file for the examination of some seventy-five thousand employees.

The ever increasing demand for mica and other strategic minerals has made necessary the examination of large numbers of men for this industry. More than a thousand men were examined on a single visit of the examining unit into the mining area around Spruce Pine and Bryson City. As the period covered by this report comes to a close the examining unit is again operating in Spruce Pine where it has been since March 1. Numerous men never before engaged by the mining industry are being located by the local United States Employment Office and sent in for examination; dozens of teen age boys are employed and sent in for examination; scores of older

men—old timers in the industry—are being sent in for re-examination; and finally, men are now being imported into this area from other parts of the State. Other areas are impatiently waiting for the services of the examining unit. If it were possible to obtain equipment and personnel, the Division could easily double, and probably triple, and yet all would be kept busily and profitably employed.

ENGINEERING ACTIVITIES — The engineers are equally hard pressed. All mines are being put into production, many of them new, some old and inactive for years, but now being reworked. Dust counts are being made and working environments evaluated as rapidly as possible with the men and equipment at hand. Old mining concerns are expanding. New local firms are being formed, and outside interests and capital are being brought in and additional mining operations set up. We are entirely unable, with the facilities at hand, to keep up with the work. We are reaching the new operations as rapidly as possible.

Two large munitions plants have been added, and have also brought their share of additional work for the engineers. These are new hazards, and require careful and extremely accurate analysis. Some of the chemicals used are relatively new and their effect upon the working environment little known. This necessitates a close and frequently repeated analysis, all of which is time consuming.

The shipyards—now one of our largest employers of labor—also demand much of the engineers' time. Numerous fumes from welding and other operations aboard ship present knotty problems. One of the most serious of these is lead poisoning, and is of vital concern to both engineers and doctors. The air craft industry is beginning in the State and doubtless will bring its share of problems and responsibilities. The asbestos textile industry has long been with us, but has been largely swallowed by the war demands, and has grown considerably. Its dust problem is always an important part of our activities.

MEDICAL

	1934-36	1936-38	1938-40	1940-42	1942-43
Examinations—Clinical and X-ray	567	5,885	3,314	5,928	1,735
Company Groups Examined—Mica and Spar 80, Foundries 36, Asbestos 9, Stone Cutting 25, Kaolin 4, Quarries 6, Pyrophyllite and Talc 8, Gold 2, Coal 1, Lead and Zinc 1, Tunnels 2, Olivine 1, Ilmenite 1	5			176	
Blood Specimens Collected for Serological Tests		3,100	2,780	5,800	1,676
Autopsies		3	2	3	
Compensation Hearings—Expert Testimony					
Rendered		6	21	29	3
Special Examinations, Litigation Involved		8	3	12	
Plants Investigated for Problems of Dermatitis			10	5	
Papers, Lectures, and Radio Talks			6	8	2
Foreign Visitors—India 1, Turkey 2, Canada 1, Peru 1, Mexico 1			1	6	
Domestic Visitors—U. S. P. H. S. 10, South Caro- lina 3, New York 1, Michigan 1, Rockefeller Foundation 3			3	18	
Part-time Assistants—Physicians 8, Technicians 1			1	9	3
Case Reports Prepared for Claims Filed			12	35	5
Clinical Examinations — Lead Workers				67	
Blood Studies—U. S. P. H. S. Applicants				84	
Blood Studies—Lead Workers				107	
35mm Films					22,000
14" by 17" Retakes					882

ENGINEERING

	1934-36	1936-38	1938-40	1940-42	1942-43
Impinger Samples of Dust Collected	284	586	407	444	414
Exhaust Ventilating Systems Designed	4		7	50	9
Papers, Talks, and Articles	65	38	34	39	4
Number of Plants Visited for Dust Counts		47	71	91	148
Industrial Hearings—Compensation		6	11	5	2
Number of Plants Visited for Inspection			43	170	168
Number of Plants Visited for Information and Dust Control			71	141	17
Number of Plants Visited for Special Investigation and Tunnels			109	21	37
			23	13	0
Petrographic Analysis for Silica Content			26	87	0
Screen Analysis				1	
Number of Assistants (U.S.P.H.S.)				3	1
Reports Prepared — Industrial 119, Quarterly 8, Monthly 24, Biennial 1, U.S.P.H.S. 3			177	144	274

NUTRITION SERVICE OF STATE BOARD
OF HEALTH

Dr. John F. Kendrick, Executive Secretary

Since I reported to you in 1942, the food

problem has become one of the most frequently discussed of all subjects. Two circumstances have been responsible for this rather sudden upsurge of public interest. First, perhaps, has been the fear that there might be such a

severe food shortage that many persons would find it impossible to get enough food, and second there has been a growing realization that even with a plentiful food supply, many of our people are not eating the foods that contribute most to good health.

The problem of nutrition is a very broad one. It involves production, conservation, storage, transportation, distribution, preparation, education, economics, and medical and public health considerations. As such the problem cannot be solved by one agency working alone. It requires the cooperative efforts of all agencies concerned with one or more aspects of the nutrition problems. Realizing this, the State Nutrition Committee, which I told you about last spring, has organized sub-committees to conduct State-wide coordinated activities as follows:

1. Publicity and Information
2. Food Production
3. Food Conservation and Utilization
4. Public Health and Clinical Nutrition Services
5. Education in Nutrition through the regular school program, through the school lunch program, and for adults
6. Nutrition services for industrial groups.

In order to make this work really State-wide, the State Committee has sponsored the organization of nutrition committees in every county, with sub-committees identical with those named above for the State Committee. To date, such committees have been organized in 89 of our 100 counties.

Of more immediate interest to you will be a brief resume of the contribution that the health department is making to the State Nutrition program, or is preparing to make. Our organization for the study of the nutritional status of population groups—"The Cooperative Nutrition Study"—opened a laboratory in May, 1942, in the State Laboratory of Hygiene. This is in addition to the laboratory maintained at Duke Medical School. Studies, involving a medical history, a physical examination, a seven-day food intake survey of each individual, and a laboratory examination of 25 cc. of a sample of blood, were completed of a county

group, an NYA group, and several school groups, and similar work with another county group is nearing completion. This work is tedious and time consuming but it offers the only means we have at present of detecting and identifying early or mild nutritional deficiencies.

Planning further, and with a view to providing advisory nutrition services to local nutrition committees, health clinics, school lunch programs, industries, and State institutions, I have succeeded in securing funds to establish a nutrition service in our State Board of Health. So, within a reasonable period of time, I hope to be able to report to you that we have established a nutrition division, similar in every respect to the other divisions of our State Health Department. Furthermore, we have a fund to be used to help finance the cost of county nutritionists in a few counties. One county has already taken advantage of this opportunity and has employed a nutritionist to serve on the staff of the county health department.

VENEREAL DISEASE EDUCATION INSTITUTE

Mr. Capus Waynick, Director

The North Carolina State Board of Health has set up a special project which is intended to strengthen the program for the control of the venereal diseases. The medical forces at work in this program have realized that the treatment of those who are known to be infected with syphilis and gonorrhea does not constitute a rounded control movement. Something else is needed—the spread of authentic information among the people about the prevention and cure of these diseases.

We established a system of clinics, 306 stations in this State, and these clinics have been handling a heavy patient load. But all that they and private physicians alone can do will not make sufficiently rapid headway against these dangerous epidemic diseases. The arousal of the people to full understanding of them and to cooperation with the health forces will win this fight as it has

won others. We need to improve the educational techniques in this field.

Through the clinics, excellent work has been done in educating the patients who clear there. Some specialists in medical circles, including the Surgeon-General of the United States, Dr. Thomas Parran, and the Assistant Surgeon-General, Dr. R. A. Vonderlehr, have been effectively outspoken about the venereal disease danger and the possibilities of control, but they, too, have recognized the need for intensive general education in the subject.

The Venereal Disease Education Institute, set up under the North Carolina State Board of Health, and sponsored by both the U. S. Public Health Service and the Zachary Smith Reynolds Foundation, is an adventure in this specialized field. The Institute was set up to originate educational materials, to demonstrate them and to evaluate their impact.

The Institute's work has been going forward in the hands of a small staff of writers and artists. A demand for graphic materials, texts, all kinds of educational devices, has been felt already in the Institute. That demand is coming from all parts of the country. The Institute has begun an intensive demonstration of educational materials and methods in selected areas in North Carolina. This demonstration will be pressed in the immediate future.

It is too early to give anything more than an estimate of the extent to which this agency will be able to influence and to aid in the national venereal disease educational work, or to make more than a preliminary report on its field work in the State. But the need for inspiration and help in the country at large is obvious to those of us who are watching a movement that is intended to free the people of two of their greatest health scourges and the agency has an opportunity to render high public service.

Needless to say that an agency which is expected to be widely helpful in this movement proceeds cautiously with its work, guarding the scientific integrity of its materials, with the aid of the highest medical advice, and endeavoring to be skillfully objective in

its evaluation of its own and other materials and methods.

SCHOOL-HEALTH COORDINATING SERVICE

Dr. W. P. Jacocks, Director

The School-Health Coordinating Service had its beginning in 1939. In last year's report a statement was made concerning the purpose of the work, the cooperating agencies concerned, and the plan of procedure which has been followed. The necessity for the collaboration of the Department of Public Instruction and the Department of Public Health in carrying out school health work is obvious and requires no argument as to its value. Working separately this phase of health work has never been satisfactory. The attempt of these two groups to work together in North Carolina is unique and bids fair to bring success. Acknowledgement is hereby made to the Rockefeller Foundation and to the General Education Board for generous financial aid and other support in this project.

STAFF: During the past year there has been a change in staff members by reason of the war. Dr. Walter Wilkins resigned on June 1st and was replaced by Dr. W. P. Jacocks on October 5th. Miss French Boyd, nutritionist, resigned on October 1st. A replacement for her has not yet been secured. Miss Olive Brown resigned on July 1st and was replaced by Miss Ruth Moore on the 1st of November. The present working staff consists of two physicians, two public health nurses, three physical education workers. Of this number two are Negroes who work in the Negro schools. One Negro public health nurse will join the staff in June. This staff has been supplied from the cadres of the Department of Public Instruction and Public Health.

ACTIVITIES:

Wayne County. The work in Wayne County was completed at the end of May. A special nutrition and health service program was carried out in white and colored schools. Food intake records were kept for the period of one week, after which time the nutritionist advised

each student as to his nutritional deficiency and suggested diets to meet them. High School students were given a complete medical examination by the medical personnel of the School-Health Coordinating Service and by private physicians. In-service teacher training in health instruction and physical education was given in 16 high schools and in 37 elementary schools. Every high school in the county set up a required program in health and physical education, consisting of three periods a week in physical education and two periods a week in health education. The subjects included nutrition, first aid, prevention of communicable diseases, personal hygiene and safety. Subsequent re-visits to Wayne reveal that much of the work, stimulated by the visit of the unit staff, is being carried on conjointly by the health and education departments of the county.

SUMMER TEACHER-TRAINING CONFERENCES. During the months of June, July and August, this service cooperated with four institutions in conducting Teacher Training classes and Child Health Conferences. The institutions were the Woman's College of the University of North Carolina at Greensboro, the University of North Carolina at Chapel Hill, and North Carolina College for Negroes at Durham and Bennett College for Negroes at Greensboro. The objectives included methods of teaching health, sources of materials for teaching health, health problems of children, an interpretation of school and community health problems, and an integration of academic subjects with the child health program. The procedure consisted of didactic instruction which included methods and materials of health education, personal hygiene, and school and community health problems. Frequent conferences, conducted on a discussion basis, were held in order to facilitate the study of the various problems presented. Practical demonstrations consisting of the modern procedure of screening children, problems in oral hygiene and problems in nutrition were taken up. At four child health camps about 120 underprivileged children were studied and received three well-balanced meals daily, med-

ical care, dental care and proper supervision. Field trips were arranged for the members of the conference who visited the municipal water plant, the sewage disposal plant, a grade "A" milk dairy, a hospital and a tuberculosis sanatorium. These conferences have received wide acclaim by teachers in the State and outside the State.

Attending the conferences were teachers, nurses, physicians and dentists. The aggregate attendance numbered 213, of whom 42 were from outside the State and 106 were negroes.

DURHAM COUNTY. In September, October, November and December a limited amount of work was done in the Negro schools in Durham City and County by the Negro members of the staff. During this period 126 teachers, 1440 elementary school children, and 280 high school students were given physical examinations. The teachers and the high school students were given Wassermann tests and Tuberculin tests. A special nutrition worker was lent to the service by the Office of Defense, Health and Welfare Services. This officer visited 12 schools, studied the needs of three cafeterias and reached 1406 persons through lectures, demonstrations, and motion pictures. In the Health Education program instructions were given to students, teachers and to the community on personal hygiene, nutrition, communicable diseases, including tuberculosis and venereal diseases, and sex hygiene. Many conferences were held with civic groups and PTAs. This work stimulated immense interest in the schools and in the Negro people of the county and city.

ALAMANCE COUNTY. Beginning January, the entire staff began operations in Alamance County. This work is still in progress. Each school in the city and county were visited in order, and at frequent intervals to impart health instruction, including sanitation, to give information and demonstration in physical education, and to render health service. The defects revealed have been corrected in part and plans are being perfected to take care of the defects of the underprivileged children. Official agencies are available for giving at-

tention to defects of teeth, skin diseases, crippled children, and to a limited extent to the blind. Arrangements have been made with local physicians to give attention to those who are unable to pay in respect to the examinations of the eyes and the fitting of glasses and to the removal of tonsils and adenoids. Several civic groups have been approached to provide funds for this service.

The scope of work which has been undertaken includes the giving of information to teachers in regard to screening out the children with physical defects, and in regard to teaching positive health procedures relating to personal hygiene, mental hygiene and environmental sanitation; the inauguration of procedures for the correction of defects; the setting up of physical education programs through instruction and demonstrations; the stressing by talks, by demonstrations at school lunchrooms, by films and by other means of the enormous value which good nutrition has in our present scheme of life; the pointing out of the advantages to the teachers of knowing something of the home life of the children under their care; the inspecting of the buildings and grounds in respect to environmental sanitary facilities and requirements; and the providing of academic training to student teachers in the teacher training colleges, and in planning for extension courses and summer institutes for those already employed in the teaching profession. It is obvious from these statements that the teacher occupies a key position in this field of activity.

Re-visits:

Brief re-visits have been made to Wayne, Stanly, Halifax, Cherokee, Clay and Graham Counties in all of which some work had been done previously. Re-visits are a part of our regular program.

PUBLIC HEALTH PUBLICITY. Since the 1942 Conjoint Session, the Senior Publicity Specialist of the State Board of Health, attached to the Central Administration Division, has continued the work of preparing and giving out news releases, under the supervision of the State Health Officer; of conducting the Board's weekly broadcast over Station WPTF, in Raleigh, and answering various inquiries involving research.

The newspapers of the State have continued to give the Department their full support—and the same is true of the news gathering associations, including the Associated Press and the United Press. Articles released for publication, while they have dealt with the general subject of public health, have been devoted largely to the war effort, which is so closely interwoven with health activities. There have been numerous news articles and broadcasts on the subjects of nutrition, the necessity for keeping up the milk standards in wartime, and various other matters of importance at this critical period. Cooperation has been maintained with the Office of Civilian Defense, the North Carolina State Extension Service and other agencies designed to promote the welfare of the people, through the orderly processes of education.

There have also been special broadcasts on the venereal disease situation, including one delivered on February 3, Social Hygiene Day, at the request of the American Social Hygiene Association and Governor Broughton. There was a subsequent broadcast on this situation, as a follow-up, the latter dealing with syphilis in the armed forces and means of combating it.

Altogether, the publicity work of the Department has been greatly accelerated during the past year, with definite objectives in view.

Notes and Comment

By THE ACTING EDITOR

SUCCESS ON the preceding pages Dr. Reynolds has submitted a progress report. Around the turn of the century the Board of Health of New York City adopted the following motto: "Public Health is purchasable. Within natural limitations every community can determine its own death rate." At the time this motto was adopted and for some years thereafter it is probable that a majority of people who saw it imprinted upon the stationery and publications of the Health Departments of both New York City and New York State thought—"This is one man's opinion, the opinion of Hermann M. Biggs," a pioneer in public health administration.

On page 91 of "The Life of Hermann M. Biggs" by C. E. A. Winslow, we find the following: "In the year 1891 the death-rate from all causes was 25 per 1000; and the specific death-rates for certain diseases (per 100,000) were as follows: typhoid fever, 23; diphtheria, 81; pulmonary tuberculosis, 307. Such rates as these should have been sufficient to stimulate vigorous action; but they were habitual occurrences and therefore ignored. It was only the new menace of Asiatic cholera in 1892 which actually made progress possible."

In 1897 Dr. Biggs in reviewing the advancement that had been made in public health uttered a note of prophecy: "While the splendid results which have been obtained may well serve for congratulation, it is not to be supposed for a moment that the limit of the improvement has been reached, or that the resources of preventive medicine have been exhausted. On the contrary the reverse is true, and while we cannot rationally hope for as rapid a reduction of the death-rate in the future as has been the case in the past, because the limit placed by the natural duration of human life is being more nearly reached with each advance, yet it may be said that almost as much remains to be done as has been accomplished in the immediate past. Notwithstanding the

increased strain which is associated with the complexity of modern civilized life, there is no inherent reason why the death-rate, even in such a densely populated city as New York, should not be reduced to 14 or 15 per thousand, or even less, and the average duration of human life increased to fifty years or more."

In 1942 North Carolina's provisional death rate was 8.1 and life expectancy was more than 63 years. Today there is no thinking person who does not realize that public health is purchasable. Dr. Reynolds' report outlines some of the more important ways in which we are spending the public health funds available to North Carolina. We have been successful—yet success can be dangerous. In these days of war we ordinarily think in military terms. If success leads us to complacency, we are placing our war against disease in jeopardy. Infectious diseases are dangerous enemies—enemies with which we cannot negotiate a peace or even an armistice. Our people may have no fear that the success of Dr. Reynolds in his campaign will lead him into any false sense of security. He, like General Montgomery, believes in reinforcing success.

RADIO BROADCAST HEALTH HOUR CHANGED TO SATURDAY

Effective June 5th, the weekly broadcast given by the State Board of Health over Station WPTF in Raleigh, was given on Saturday at 10:45 A. M., and will be heard at that hour in the future. These broadcasts formerly were heard on Thursdays at 2:15 P. M. The change-over from Thursday afternoon to Saturday morning was entirely agreeable with the Board of Health. We appreciate the generosity of Radio Station WPTF which donates this valuable time.

Don't forget the change in both the day and the hour!

Saturdays at 10:45 A. M., E. W. T.



The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

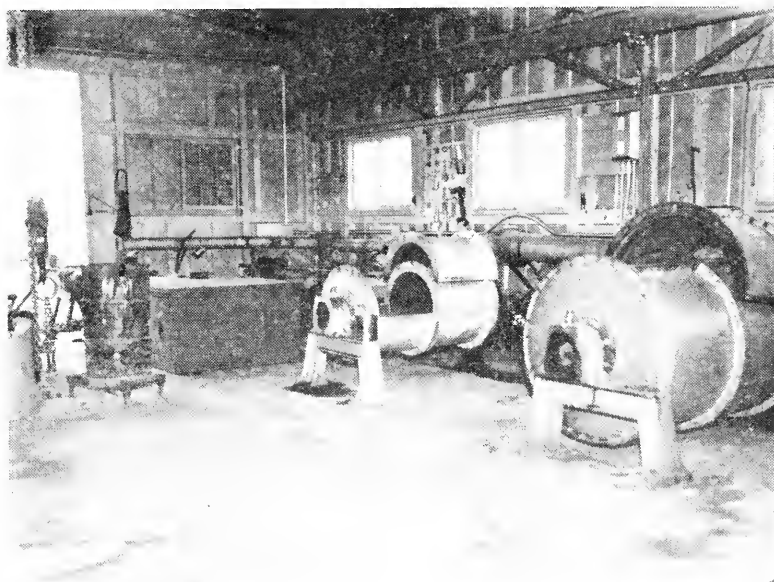
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A modern foundry room with ventilation system, designed by State Board of Health Engineer. The tumbling barrels in the foreground as well as the grinding wheels are exhaust ventilated. There were two hundred and thirty-five million particles of dust per cubic foot of air in this room before improvements were made—now the dust is captured at its source and the atmospheric dust content is negligible.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils
 Appendicitis
 Cancer
 Constipation
 Chickenpox
 Diabetes
 Diphtheria
 Don't Spit Placards
 Endemic Typhus
 Flies
 Fly Placards

German Measles
 Health Education
 Hookworm Disease
 Infantile Paralysis
 Influenza
 Malaria
 Measles
 Padiculosis
 Pellagra
 Residential Sewage
 Disposal Plants

Sanitary Privies
 Scabies
 Scarlet Fever
 Teeth
 Tuberculosis
 Typhoid Fever
 Venereal Diseases
 Vitamins
 Typhoid Placards
 Water Supplies
 Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.
 Prenatal Letters (series of nine monthly letters).
 The Expectant Mother.
 Breast Feeding.
 Infant Care. The Prevention of Infantile Diarrhea.
 Table of Heights and Weights.

Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
 Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
 Instruction for North Carolina Midwives.

CONTENTS

	Page
North Carolina Safeguards Marriage In War and In Peace	3
General Practice in New York More Than Fifty Years Ago	8
Food Conservation—Its Added Importance in Wartime.....	11
Employees' Health—A Factor in Accident Prevention	15

North Carolina Safeguards Marriage In War and In Peace

By MRS. RUTH YOUNG HARRELL
Division of Epidemiology
State Board of Health

MARRIAGE in North Carolina was once an entirely personal matter. As the wedding day approached, family and friends became emotional or critical or just curious, whichever the case might be, but the State, symbolized by a vaguely impressive little group down in Raleigh, was not interested. It was generally accepted, with a sage nodding of heads, that politics was really the business in which Raleigh was engaged, and that marriage, which of course was made in Heaven, was out of its jurisdiction!

And so, marriage went on its gloriously haphazard way. If sometimes women were mysteriously ill or children strangely marked, little was thought about it. Anyway, there was always the very excellent argument that there was nothing to be gained except heartbreak from any other course, since the damage was already done. The word "Prevention" was yet to come out of the dictionary, roll up its sleeves, and go to work! And so, the philosophy of acceptance prevailed, and a pall of indifference settled over the land. These things were "accidents" of Providence to be borne without question. It was understood that they were sometimes a young wife's lot, like an all-girl family or a husband who "played the horses"!

This naive state of affairs reflected the youthful inexperience of a country and a state

young enough to reckon danger only in terms of enemies who could be seen, who shot guns, cannons, or bows and arrows. That arch-enemy, Disease, was yet a dim figure against whom there seemed to be little defense. Unknown to the rank and file, however, a continuous battle against this enemy was being waged in many ill-equipped laboratories far from North Carolina. Brilliant men labored with research and experiment, over and over, hoping to find greater truths and surer weapons with which to fight disease; but it was painfully slow, this struggle, and that it would ever bear such splendid fruit could not be foreseen.

Meanwhile, in North Carolina, as elsewhere in America, events of importance were taking place. The same civil war that tore the young nation apart and left her bleeding and prostrate, had roused her people to many of their internal problems; had awakened them to their responsibility to each other. At last the sober truth was evident: that whatever else it brings, war always brings awakening. And so, in the dark uncertainty of the reconstruction year 1877 a little group of North Carolinians, with a wisdom and a social consciousness far beyond their own generation, established the North Carolina State Board of Health. The Civil War was at an end. Life must go on, a better way of life, for a united

nation. In North Carolina these men of vision had translated that dream into reality: a state health department to serve its people, to help them to a healthier, longer, better life.

Its first war, the Spanish-American War, found the new department a growing youngster determined to fight disease and early death with more and better sanitation measures. Soon there was peace, and marriage in North Carolina went on as usual, taken for granted in the surging young era of state and national growth. Apparently, many things were taken for granted, for in 1917 the country was engulfed in the disaster of the first World War. A nation, now grown to adulthood, awoke to the fact that it must fight for its life!

As always, peace came again, but the war had focused the attention of the civilized world on the menace of the venereal diseases. The appalling fact had been revealed that during this war the number of men with venereal infections had surpassed the number of those killed or wounded! Needless to say, many men returned from war-torn Europe with more than combat wounds and ghastly memories. Venereal disease was not new to America, but now it could no longer be hidden. It spread its vicious tentacles over a country painfully learning that even peace is not without its price and its problems. In North Carolina it could not be ignored, for it crept into the home on the hill as well as the one "across the tracks." And so, in March 1919 the North Carolina Legislature succeeded in enacting a rather general law which it hoped would control the spread of the venereal diseases. This, however, was not so easily accomplished. The word "syphilis" was taboo. It was fashionable to shudder away from even the thought of it! North Carolina was especially handicapped, for as a daughter of the chivalrous South she frowned upon any suggestion that a North Carolina woman could be or might be so infected.

Nevertheless, a definite effort was made to safeguard marriage, at least from the venereally infected male partner, by the enactment in 1921 of a law requiring that the male

applicant for a marriage license submit to a physical examination to determine the presence of venereal disease, tuberculosis, or mental defectiveness, and that the female applicant submit **only** to a physical examination to show that no infectious tuberculosis or no mental defectiveness was present. Apparently, however, public education lagged too far behind any progressive legislation, for in 1933 a group who claimed that the law was forcing marrying couples to go into other states with a resultant loss of revenue for North Carolina, succeeded in having even this half a legislative loaf repealed. This was not the setback that it appeared to be, however, as it served the very good purpose of clearly outlining for public health workers in the state the course of action necessary before premarital examination legislation could be made to "stick." The public must be educated. Both figuratively and literally they must come out of their mid-Victorian parlors where smelling salts was administered at the slightest suggestion that life was not always pretty. They must realize that the Colonel's Lady and Judy O'Grady were indeed "sisters under the skin," especially when Judy O'Grady had syphilis or gonorrhea! And that if they refused to face reality, it might come upon them some day in some heart-breakingly inerascable manner. Yes, education was the answer; education that would include even the most protected of North Carolina's daughters.

The years between the repeal of the first premarital examination law in 1933 and the enactment of the present law in March 1939 were active years of intensive public education against the venereal diseases. The mere ripple of awakening after the first World War had grown into a tidal wave sweeping across the country. Wisely, public health had enlisted women's organizations everywhere in its fight against venereal disease. Women en masse were not afraid to face the danger that shocked women individually. With all the courage and vigor of which they are capable they said to themselves, and to each other: "It could happen to me, or to mine!" And when

they faced that thought, the smelling salts era was definitely dead! The fact that this law makes no distinction between the sexes is a real tribute to the courage and honesty of the women as well as the men who waged the educational and legislative campaign that effected its enactment. The law states, with complete candor, that the female as well as the male applicant for a marriage license in North Carolina shall comply fully with its requirements. With its enactment of this law North Carolina came into the news as one of the few states who dared lift up her voice legislatively to declare: "I will safeguard marriage within my borders. By this law I shall protect the healthy partner against the diseased partner, and the unborn child against such a fate!"

Quick to reinforce its support of one of the best public health measures ever enacted, the North Carolina State Board of Health immediately designed and began to distribute certificate blanks to be filled in by the examining physician and presented by the applicant to the register of deeds who was to issue the license. Simultaneously it began the continuous effort to keep an evergrowing public in this and in other states informed regarding the requirements of the law, and to show them that the matter of obtaining a North Carolina marriage license is not now a complicated procedure. Actually there are no necessary complications if interested persons will obtain the correct information before they apply for license. This information is always available, upon request, from any register of deeds or from the State Board of Health in Raleigh. Registers of deeds in our 100 counties are supplied with certificate blanks and with information as to any changes in our law or, whenever available, with information regarding the laws of other states; also, with information as to those physicians who are licensed to practice in North Carolina. In addition, certificate blanks and information are supplied to all physicians requesting them as well as to innumerable individuals, upon request.

The requirements of this law are simple.

They are two-fold; that is, a negative blood test and a negative physical examination are required. As soon as both applicants present this certificate proof to the register of deeds to whom they apply, they are eligible to receive a marriage license immediately. As there is no waiting period in North Carolina after these health requirements are met, the wedding may take place as soon after license is issued as the applicants may desire.

Physical Examination. Only a physician licensed to practice in North Carolina may perform the general physical examination. Civilian applicants will receive certificate number 306 from the examining physician for presentation to the register of deeds. The original report of blood test, which is mailed direct to the physician who submitted their blood specimen for testing, should be attached to form 306, since both are required as proof of eligibility to receive a license. Military service applicants must use certificate form 377 if the physical examination is made at their military post.

Blood Test. The blood test may be made as follows: (1) By the North Carolina State Laboratory of Hygiene or any N. C. laboratory which is approved by the N. C. State Laboratory of Hygiene for performing this test; (2) By the state health department laboratory of any state or by any local laboratory in another state which is approved by its own state health department for performing this test; (3) By any Federal Government laboratory, including those connected with some branch of the military service. Military service applicants whose blood test is made at their military post should use certificate 379. There is no certificate form necessary or available for the blood test report of civilians whose blood test is made in North Carolina. As above-stated, the original report of blood test will be sent to the physician by the laboratory performing the test on the laboratory blank used for that purpose.

Soon after the enactment of this law, while America was yet at peace, it became apparent that a reciprocity arrangement was necessary in order for persons from other states to marry

in North Carolina without the delay of awaiting a blood test report after arrival here. Civilian out-of-state blood test certificate 376 was the answer. Out-of-state civilians may use this blank for their blood test report made in another state and thus avoid any delay. The general physical examination, usually a routine matter, should not require more than an hour after an out-of-state applicant has arrived in North Carolina. This could not be considered a real cause of delay or a serious inconvenience to any wedding plans. Needless to say, the original of all certificates must be presented to the register of deeds who is to issue the license, while the duplicate, or buff-colored copy, should be mailed to the State Board of Health in Raleigh.

Some other points about this law in which there is usually considerable interest are the following:

1. Application for marriage license must be made within thirty days after the date on which the blood specimen is taken for testing, and within thirty days after the date of the general physical examination.

2. Persons who leave North Carolina to be married and return to this state to live, must comply with the requirements of this law within sixty days after their return to North Carolina to establish residence. Certificates 312 and 313 are used for this purpose.

3. Certificate forms in use in other states are not accepted in North Carolina. Only the North Carolina State Board of Health is authorized under the law to design and distribute the official certificates for this state. These are obtainable from any register of deeds, practicing physician, or the State Board of Health.

4. The serologic or blood tests which are acceptable under this law (by U. S. Public Health Service standards) are: **Complement fixation tests:** Kolmer and Eagle. **Precipitin tests:** Kline, Kahn, Eagle, and Hinton.

5. The following health conditions, physical or mental, forbid the issuance of a marriage license in North Carolina: Any venereal disease in the infectious or communicable stage; tuberculosis in the infectious or communicable

stage; epilepsy; idiocy; imbecility; mental defectiveness; unsound mind.

People often ask if it is possible for a person infected with syphilis to obtain a marriage license in North Carolina. Only under the following conditions is this possible: If both applicants are informed of the infection, and if the infected applicant has already had adequate, continuous weekly treatment for a period of at least one year and signs an agreement to continue such treatment until cured or probated by the treating physician. There are only two instances in which this requirement is waived: (1) If the female applicant is pregnant the infected applicant is not required to have already had one year of treatment, provided he or she signs the agreement to take treatment until cured or probated by the treating physician. This is done to protect the legitimacy of the offspring. (2) If the female applicant is past the childbearing age the infected applicant is not required to have already had one year of treatment, provided he or she signs the agreement to take treatment until cured or probated by the treating physician. In all instances of an infection both parties must be informed of its presence. Any of these situations require the use of conditional certificates. These certificate blanks have an agreement form to be filled in by the infected applicant, detached along the perforated line, the original filed with the register of deeds who issues the license, and the duplicate (buff-colored copy) mailed to the State Board of Health. If the infected applicant fails to continue the course of treatment to which he or she has agreed, the State Board of Health, through its local health officer, institutes follow-up measures to assure the fulfillment of this agreement. Conditional certificate blanks are numbered 307 (for infected applicants examined and married within North Carolina), 313 (for infected applicants married outside North Carolina whose subsequent examination reveals infection), and 378 (a special military certificate blank).

This law was already well established when the present war began, but, like life every-

where in America, it was geared to the needs of a people at peace. No military problem existed and so no military certificate blanks were envisioned. But since that dark and infamous Sunday in December 1941 when the western sky turned suddenly red with American blood, many changes have come to North Carolina. Now her pleasant, peaceful face wears an alert, military expression. In small towns and countrysides, where the young once complained routinely that "nothing ever happens," the horizons now bristle with guns, with tanks, with ships. North Carolina's sleepy skies know the roar of training planes; her streets are colorful with olive drab and "sun tans," Navy blues and whites, and with the somber forest green of the Marine Corps. Overnight she has become an armed camp! So well suited is she to military training purposes, by climate, location, topography, that men from every state in the Union pour in by every troop train. They are young, or youngish; they are lonely; they are our hope for the protection of all that we have today or desire for the future. And so what is more normal, or better for America—and for them—than the fact that more and more of them decide to marry?

Today North Carolina stands among the very few states who have taken a definite step to help military service men who wish to marry within their borders. The State Board of Health, alert to the purpose for which it was created three wars ago—to serve the people—early took cognizance of the problems of these uniformed strangers. It was never the purpose of the North Carolina premarital examination law to confuse and inconvenience couples trying to marry in this State, and so this Department determined that it must not now appear so. At its request the Attorney General of North Carolina took the matter under advisement and ruled that under the Medical Licensure Act of North Carolina physicians in military service were automatically licensed to practice in this state. Accordingly, there were made available immediately special military certificate blanks covering the blood test (379) and the

general physical examination (377). By the use of these special certificate blanks any man or woman in the military service may have both the blood test and the physical examination made at the military post anywhere in the United States and bring the results for presentation to the register of deeds promptly after arriving in this state.

No civilian can adequately express what that assistance means to the service man whose hope of a furlough or leave has faded into the reality of a pass of just a few hours, and whose fiancée perhaps is coming half a continent for that short stay. To have things made easier at this most momentous time is one of the unforgettable kindnesses, for no man in military service who marries during wartime ever really stands alone with his bride at the altar; he is always attended by those twin specters, "Early" and "Long" Separation! A short while at best, and then these uniformed men on whom our world depends are gone from our borders, separated from their brides, their homes, their families and friends, with their lives uprooted, their future in peril. It is good to have them remember that North Carolina was a friendly, hospitable place, officially as well as individually.

For war still brings its awakening, the renewed consciousness of our debt to each other. In 1943 the State Board of Health, in the midst of her sixty-sixth year and her third war, has attained a mellow wisdom. She knows, among many other things, that wars may come and wars will go but that marriage remains; that it must be protected and encouraged; that especially now the legal barriers erected in our state for that protection must be simplified and offered to the lonely service man from faraway Oregon as wholeheartedly as to one of her own civilian sons; offered as a kindly protection and not a deliberate obstacle to his happiness. She knows that men who go out to fight and perhaps to die must have a real reason, and that world politics, or even the mass killing of the helpless overseas are somehow lonely, impersonal reasons when death is whining by in every

bullet or crashing with every bomb. In short, she knows that whether the fighting man is called "Johnny Doughboy" and sings "Over There" as he marches away in the dim dawn of 1917, or is known as "G.I. Joe" and whistles "Coming In On a Wing and a Prayer" in some flak-riddled dawn of 1943, it is the reality or the dream of home, marriage, the basic things for which America

stands, that he holds close to his heart in the zero hour of battle. And so, she is proud to have shown kindness and appreciation to many of those who were but a short time our guests and who now have gone forth with that endearingly casual air that the typical American fighting man always seems to have, to see what can be done to save the world that is now very much worth saving.

General Practice in New York More Than Fifty Years Ago*

By HENRY MANN SILVER, M. D.

New York City

IN 1876 the City of New York was virtually on Manhattan Island. The population was 1,041,866, made up of native-born Americans, Irish, some Germans and Italians. The great wave of immigration from Central Europe and Russia had not taken place. Most of the inhabitants lived below 59th Street. The Americans were scattered well over the city; the Irish on the extreme East and West sides of the city along the water fronts. Many of the Irish, Germans and Italians lived in tenement houses.

The Board of Health allowed crowded front and rear tenement houses to exist with dark, damp rooms never receiving a ray of sunshine, veritable breeding places of disease. More important, they allowed small grocery stores and butcher shops to display food without protection from swarms of flies and clouds of dust. The milk was kept cool in summer with ice from infected lakes and rivers in the upper part of the state, placed inside the cans.

The streets, mostly paved with cobblestones, were swept with machine or hand brooms. The dirt was collected in piles and frequently allowed to remain for days for the wind to scatter. In those days it was dirt mostly. There was no knowledge of the billions of disease-producing germs it contained.

In many sections of the city there was a liquor saloon on each of the four corners, with

beer saloons in the middle of the block where mechanics and laborers spent much of their weekly wages, thus depriving their families of the necessities of life.

On the first of October, 1876, I left Bellevue Hospital and, with the background mentioned above, opened an office at 10 East Third Street in a thickly-settled section of the city. Here I had to wait twelve years before receiving a hospital visiting appointment. As the service at Bellevue Hospital was purely surgical, I was poorly prepared to enter general practice. I soon gained a large experience in diseases of the heart and lungs in the Eastern Dispensary; in obstetrics from a connection with the Marion Street Lying-in Hospital, and in miscellaneous diseases by caring for the poor of Grace Church. In the dispensary, large numbers of young men and women in the early stages of consumption were seen; also large numbers of functional diseases of the heart due to indigestion were met with in young women. These were easily relieved by regulating the diet and the use of R. & S. mixture combined with tr. nux vomica. After several years in the dispensary I was appointed visiting physician to a large section of the

*Address given at a meeting of the Society of the Alumni Bellevue Hospital, held at the Yale Club the evening of March 3rd, 1943. Reprinted by permission—Southern Medicine & Surgery, Charlotte, N. C.

dispensary district in the East Side of the city. I now visited the patients in their homes. Here I had the opportunity to see and study cases of pneumonia, advanced cases of heart and kidney diseases, and consumption in advanced stages. These were interesting, as this disease caused the largest number of deaths. Most of the cases were found in front and rear tenement houses. Most of the patients were untidy, and slovenly habits combined with poverty made them easy victims of the disease. No care was taken of the sputum; it was expectorated on bare floors, carpets, rugs and even on the side walls, and left to dry. The members of the family were constantly breathing the dust of dried sputum loaded with tubercle bacilli. No wonder at that time consumption was considered to be an inherited disease. I have seen many whole families—father, mother and several children—die one after another until all members of the family were dead. Some blocks in the lower East Side had so many cases residing there, that they were called "lung blocks." As yet we did not know the real causes of disease.

Suddenly, like the appearance of a brilliant meteor in the sky, Koch in 1884 announced he had discovered the cause of consumption, the tubercle bacillus. Those living today can hardly realize the excitement and enthusiasm which the discovery caused, not only in the medical profession, but also with the general public. Hundreds of medical men went to Koch's clinic to study the greatest discovery of the age. In 1884 Dr. Herman M. Biggs went to Germany to study this branch of medicine. Returning in 1885 he took charge of the Carnegie Laboratory and gave instruction in tuberculosis. It is difficult to understand why it took the Board of Health so long to put the knowledge gained by the discovery of the cause of this disease into practical use in stamping out the disease. It was not until 1893, nine years after Koch's discovery, that Dr. Biggs, who was then connected with the Board of Health, pointed out that the disease was communicable and preventable. In 1894 the Board of Health adopted the policy of sputum examination, report and

registration, compulsory for institutions. In 1897 they required the report of private cases by physicians. This met with great opposition. The Academy of Medicine and the County Medical Society opposed it. The county society even went to Albany and requested the legislature to pass a bill ordering the Board of Health to rescind the order. The order was not rescinded.

Another disease that gave the Board of Health much anxiety was cholera infantum, a disease of summer months, receiving its name from some of the symptoms resembling cholera. It was much more common in tenement houses occupied by the poor. In three months—July, August and September, 1875—there were 2,735 deaths from diarrheal diseases; mostly cholera infantum. During the very hot weather children would die by hundreds each day. In the very acute cases, a child plump and healthy in the morning would be nothing but skin and bones in the evening. The disease was also known as acute milk poisoning. In spite of the many thousands of dollars the Board of Health was spending on a summer corps of doctors whose duty it was to visit houses and hunt out sick children, the swarms of flies and clouds of dust and germ-laden milk were killing children by the thousands. The great defect in this movement was that it was directed towards treating sick children, and not primarily towards the prevention of the disease. For three summers, Dr. Janeway appointed me a member of the summer corps and I had a good opportunity to study the defects of the plan.

It was not until the late 1880's that the Board of Health began the efficient regulation of the supply and distribution of milk and protection of food from flies and dust. In 1892 Nathan Strauss not only began to pasteurize milk, but also to establish infant milk stations where mothers could obtain milk specially modified for babies and delivered the milk ready for feeding. By this means he was instrumental in saving the lives of thousands of children and cholera infantum was wiped off the list of children's diseases.

I know of nothing that would terrify the

parents of a child more than to be aroused at night by the barking cough of croup, a disease which caused 758 deaths in New York in 1875. To witness a child slowly dying of suffocation was a terrible experience even to physicians. Tracheotomy saved a few lives, but on account of hemorrhage and swollen tissues of the neck it was a very difficult operation. In 1880 Dr. Joseph O'Dwyer, of New York, began to intubate cases of croup at the Foundling Asylum. In 1885 he began to publish his results. This treatment removed all terrors from this disease and when Klebs in 1883 discovered the true cause of diphtheria it was found that croup was a manifestation of diphtheria. Croup is no longer mentioned as a distinct disease.

In 1876 the Board of Health took notice of the large number of deaths from diphtheria—in 1875, 2,329 with a population of a little over 1,000,000; in 1930 (9 months) 170 with a population of a little over 7,000,000.

All children over 6 months should be immunized. Doctors of the present day have little idea of the dreadful cases of diphtheria the doctors of the older generation were called in to treat. No one who has ever seen an acute severe case will forget it—a child struggling for breath, eyes staring, face and neck swollen, a bloody discharge from nose, mouth open, tonsils swollen and entire throat looking as if painted with tar.

Although Klebs discovered the bacillus of diphtheria in 1883, ten years had passed before the Board of Health began to adopt measures to efficiently control the disease. In 1893 Dr. Park began its diagnosis by culture methods. He established 40 stations, mostly in drug stores, where physicians could obtain without charge tubes of the culture medium with sterile swabs for inoculating the medium, also directions for use.

In 1894 Behring brought out antitoxin. Early in September, 1894, Dr. Park began the preparation of diphtheria antitoxin in the City of New York. At this time between 35 and 40 horses were used for this purpose. Early in 1894 Dr. Williams, Dr. Park's associate, isolated the new culture, a strain of the diphtheria

bacillus from a case of mild tonsillar diphtheria, without passing it through animals, and it was found to produce the strongest diphtheria toxin known.

In January, 1895, the first antitoxin produced in the laboratories of the Board of Health was used in two cases in the Willard Parker Hospital; and the conquest of diphtheria, begun with these two cases, was brought in 1936 nearly to the point of extinction of the disease.

Dr. Joseph E. Winters, one of the most prominent clinicians of the period, led a vigorous opposition to the new method. He claimed that its use was productive of imminent danger to life. This caused the profession as a whole to hesitate to use it. A vigorous debate between Dr. Winters and Dr. J. W. Brannan before the Academy of Medicine resulted in an overwhelming vote in favor of antitoxin treatment, but it was a long time before Dr. Winters gave in and acknowledged the treatment useful.

The confinement cases I took care of for the Marion Street Lying-in Hospital were among the very poor, mostly living in front or rear basements in tenement houses. Midwives looked after the German women. The rooms were dark, dirty and damp. In some cases it was difficult to find a clean towel to wipe our hands on after delivery. When I could do no better, I used instruments which had simply been washed with soap and hot water after the last instrumental delivery. I would administer chloroform, two women would assist while the child was delivered with forceps. The doctors' hands were not washed before labor began. Vaginal examinations were infrequent, but great care was taken to see the uterus was firmly contracted after delivery. This was done by compression with the hand and use of Squibb's extract of ergot. Not one of the cases cared for in these insanitary surroundings gave me the slightest anxiety. No complications arose, no rise of temperature, and convalescence was rapid. Was this due to great powers of resistance, weak germs, or no germs? Or was it due to prolonged use of whiskey?

Unfortunately the picture changed. Before the causes of disease were known, I was called to see a patient who lived in a fine house, plenty of money and servants, everything clean and pleasing to look at. The child was born before I reached the house, placenta was difficult to deliver, compression by the Credé method; no vaginal examination made, placenta rotated on delivery to form a cord of membrane. Patient appeared to be in good condition immediately after delivery. Temperature began to rise on second day and death took place from puerperal fever a few days later. Prof. Wm. T. Lusk saw the case with me in consultation several times, but nothing could be done. It is interesting that a few days ago in the Academy of Medicine the centenary of the publication by Dr. Oliver Wendell Holmes of his paper on "The Contagiousness of Puerperal Fever" was celebrated.

On the first day of July, 1888, I sailed for Europe. When I returned late in December I brought with me a Tarnier axis-traction forceps. The night of the day I reached New York I was called to Gouverneur Hospital to see a woman in her fourth confinement. Three of the children had been born dead on delivery, the pelvis being contracted. I applied the Tarnier forceps and delivered a living child. Two years later I again delivered the woman of a living child in her own home and with the same forceps.

There were many cases of diseases of the heart, with entirely different symptoms from the coronary thrombosis symptoms of the pre-

sent day, with sudden death. These symptoms, a weak and irregular pulse, dyspnea and general edema, formed a chronic valvular disease which caused much suffering and finally ended in death. These symptoms were caused by a shrinkage of the cusps of the valves of the heart, due to the endocarditis. The mitral valve being the most frequently involved, a murmur is the outstanding sign of the disease. More than fifty years ago, the removal of the tonsils was stressed. The instrumental removal then was an insult to injury as only a portion was removed, the raw surface of the portion remaining was soon covered with a thick layer of scar tissue which closed the crypts and prevented the escape of infection. This was absorbed and finally reached the endocardium. It is only where the entire tonsil is removed that the above-mentioned chronic valvular disease is prevented or relieved when present. At present the clean removal of the tonsils has not reduced the number of the chronic valvular cases but has caused supuration of the glands of the neck to disappear.

In 1887 the Society of the Alumni of Bellevue Hospital opened its doors, and, for 12 years before this, I was gathering the experience to have the pleasure of telling you, its members, that from the days of unwashed hands and no knowledge of the cause of disease, the bright lights of discovery opened up the beginning of the wonderful advancement of the present day.

What will the future be?

Food Conservation---Its Added Importance in Wartime

By JOHN F. KENDRICK, M. D.
State Board of Health, Raleigh, N. C.

ONE of the meanings of conservation is to preserve from change or destruction, and the preservation of foods from change or destruction by canning, drying, freezing, brining, storing, or some other process is what

is commonly meant when one speaks of food conservation. This, however, is only one aspect of food conservation. Used in this sense it implies merely the processing of foods in times of plenty to insure against shortages

during the non-productive seasons. Such a definition might have been considered adequate and sufficiently inclusive several years ago, but with the development of the newer knowledge of nutrition, no definition of food conservation that fails to include preservation of the essential vitamins and minerals that occur naturally in the different foods, and the avoidance of waste, can now be considered adequate.

Let us consider, then, the importance of food conservation in terms of: (1) the present increase in the quantity needed, (2) the preservation of the essential nutrients, and (3) the avoidance of waste.

While any estimate of the quantity of food that will be required this year and in 1944 to meet the needs of our civilian population, our armed forces, and our allies could be only approximated, we can safely assume that the demand will be far beyond the supply. During the year 1942 somewhat less than 14 per cent of our total food production was earmarked to meet the requirements of the armed forces and for lend-lease. But even with such a limited percentage of our total food production being diverted from the usual channels it became necessary to begin rationing a few food items. In the first quarter of 1943, the rationing list was extended to cover a good many of our essential foods. The utmost increase in food production to be expected in 1943 as represented by the goals set for agriculture is 5 per cent. Against that slight problematical increase in the amount of food available we have an armed force of several million more men than we had in 1942. Our lend-lease obligations will certainly not diminish, and the prospects are that we shall be called upon to share our food supply not only with the people of North Africa but with those of other conquered territories as well.

Some idea of the magnitude of the goal we should set for ourselves to meet the food challenge of 1943 may be gained by a review of the number of cans of food processed by home canners in North Carolina during World War I and in other critical

years. According to the records of the State Agricultural Extension Service approximately 8 3/4 and 5 1/3 million cans of food were processed in 1917 and 1918, respectively. During the next 14 years the number of cans processed dropped sharply, averaging only about 1 1/2 million cans per year. Then in 1933, at the height of the depression, the number of cans mounted to 11 1/2 million, remained at about 6 million a year for the next eight years and reached a peak of 12,703,132 in 1942.

An attempt to state even the approximate amount of food that should be conserved in North Carolina during 1943 would probably entail a considerable margin of error. The fruit crop was severely damaged by late frost, the growing season for many vegetables has not been as good as the average, insects are exacting a heavy toll, and there has been a shortage of suitable food for animals and poultry. On the other hand, the Victory Garden campaign probably has resulted in the planting of more gardens in both rural and urban areas than ever existed in North Carolina. Moreover, the State Nutrition Committee, in cooperation with local nutrition committees, conducted a state-wide Food Preservation Campaign in March and April. The objective of this campaign was to conduct food conservation demonstrations in every community in the state, to the end that any interested housewife, white or Negro, could obtain appropriate instruction to enable her to properly conserve any foods she may have. Twenty-two white and three Negro assistant home agents were assigned to work throughout the canning season in some of our larger cities. Home Demonstration Agents, Farm Security workers, Vocational Education teachers, and numbers of home economics women in business and home economics students are devoting much of their time to food conservation work. Community canneries have been established in both urban and rural areas and plans have been made for the widest possible use of public and private processing utensils.

Under the chairmanship of Dr. E. H. Ellin-

wood, County Health Officer, the Greene County Nutrition Committee has established a community cannery at Snow Hill. The Board of County Commissioners have established a fund to be used by this cannery for the purchase of food to be used for school lunches. In addition, Dr. Ellinwood has arranged with individual growers to can all foods brought in for the purpose on the understanding that half of the processed food goes to the supplier and the other half to the school lunch "bank." In the fall all processed foods will be distributed on a per capita basis to the white and Negro schools of the county. Other plans for processing foods for school lunches are being carried out in many counties, but the Greene County plan appears to offer very practical and sure methods of swelling the total amount of food to be conserved in the state this year.

In view of the present availability of detailed literature on modern methods of food conservation and even of personal assistance, if such is required, from home demonstration agents, Farm Security workers, members of local nutrition committees and others, it would seem logical to expect that every North Carolina housewife or home-maker will take advantage of any opportunity she may have to conserve even small quantities of food. That we shall experience food shortages during the approaching fall and winter months is not to be doubted, and the likelihood of this eventuality should impress every one of us with our individual responsibility to contribute in the greatest possible measure to food conservation. In this connection it may be of interest to quote here a paragraph from the Report of the Southern Region representatives at the Conference of State Nutrition Committee Chairmen held at Washington, D. C. on May 27-29, 1943: "The representatives of this region are cognizant of the need for increased emphasis on all phases of food production, conservation, and utilization, as this is a deficit food and feed production area. Because of low income, insufficient production of protective foods and inadequate education, a large proportion of the population has never had an adequate diet. Marked

shifts in population, both civilian and military, have introduced special problems in food allocation, distribution, and preparation. The emphasis on war crops, the shortage of nitrogenous fertilizer, and the restricted in-shippments of feed from other areas are creating a shortage of livestock feeds which threatens to become critical, and in turn will be further reflected in decreased food supplies. These conditions introduce many problems which must be given special consideration at the State, regional, and national level." The recommendations that followed this statement included essentially those steps in food production and food conservation which North Carolina Nutrition Committees were already undertaking.

The second aspect of food conservation mentioned above, namely, the preservation of the essential nutrients, is of the utmost importance. The food groups now referred to throughout the nation as the "Basic Seven" will usually provide all of the vitamins and minerals required by human beings if eaten in adequate quantities provided they are fresh or have been properly stored, prepared and cooked. Nature endows our foods with ample supplies of vitamins and minerals to meet our requirements but, unfortunately, the manner in which the foods are handled, stored, prepared or cooked may result in great losses of these dietary essentials. One very flagrant example of such loss is the manufacture of white flour from wheat in which the coverings and the germ of the grain, those parts which contain the minerals and vitamins, are removed and discarded. From the farm or garden to the table many precautions must be taken to conserve the vitamins and minerals of both vegetables and fruits. Some of the vitamins are destroyed simply by storing vegetables at room temperature and allowing them to wither or dry for a period of a few hours or over night. Standing at room temperature, lettuce may lose as much as 40 per cent of its vitamin C and spinach 35 per cent in one day, while canned string beans left in an open container at room temperature will lose about a third of their vitamin C in

six hours. Among the more important points to be considered in conserving vitamins and minerals in fresh fruits and vegetables are: temperature, period of storage, humidity, cooking time and the avoidance in so far as possible of bruising, soaking, and even of peeling or slicing until just before the food is to be eaten.

No attempt has been made here to do more than merely call attention to a few ways in which losses in food values may be avoided. It will be necessary to secure more complete information from members of your county or city nutrition committees, from literature provided by them, or from your local Red Cross representative. However, the following excerpt on "How to Get The Most Out of The Food You Serve," from the Reader's Digest, may be helpful to many of those responsible for food preparation:

"1. Use no more heat than is necessary to make the food palatable. Do not cook any food too long. It is better to have food slightly underdone than overdone.

2. Use little water, bring it quickly to a boil, and turn off the heat as soon as the food is "done." With a thick-walled pot and a low flame, some vegetables can be cooked without any water at all. The metal absorbs and distributes the heat, and the pot never gets hot enough at any one point to scorch the food. If you can't get a thick-walled pot, put a little water in the bottom of a saucepan and cook by the steam generated from it. This requires vigilance to see that the water doesn't boil away and let your vegetables burn, but it is worth the trouble. Wise cooks save the water in which food has been steamed or boiled, and use it for soups or gravies.

3. Whenever possible, avoid peeling fruits and vegetables. If you must peel them, do it after cooking.

4. Oxygen destroys some nutritive elements. Therefore avoid stirring air into cooking food; prepare chopped fruits and vegetable salad at the last moment, using the chopping-knife sparingly; don't leave lettuce long exposed to the air.

5. Don't use soda in cooking green vegetables. It increases the harmful effects of air on some of the vitamins.

6. Don't let milk stand in the sun; its vitamins deteriorate.

7. When using canned foods, never throw away the liquids. Quick-frozen foods deteriorate rapidly when thawed; put them into the pot while still frozen.

8. In cooking meat, the less heat you can use, and the shorter the cooking time, the better. Rare meat is more nourishing than well-done meat. Pork, an exception, should always be thoroughly cooked. Be as sparing as possible in the use of water."

Wastage of food occurs all along the line, from the farm to the table. Considerable amounts of food are never harvested, much is destroyed by rodents and insects, faulty transportation methods result in losses through careless handling or delay, and for numerous reasons, additional wastage occurs in both wholesale and retail food stores. Since the individual can exercise control only over waste that occurs in the home, the home maker will be interested primarily in the contribution she can make in preventing such waste as she and her family are responsible for.

It is estimated that the 34 million homes in the United States waste annually an amount of food equivalent to about 15 per cent of our total annual food production. In 1942, this would have been enough to meet the combined requirements for our armed forces and our lend-lease assignments. The waste of only one slice of bread per week in each of our 34 million homes would amount to about two million loaves each week. What would two million loaves of bread mean to the starving children of Greece or China?

No doubt waste has been checked to some extent in most of our homes since the advent of rationing but for most of us there still are leaks that remain to be plugged-up. Let us investigate and see how much lighter we can make the garbage pail.

Employees' Health---A Factor in Accident Prevention

By T. F. VESTAL, M. D.

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IN the brief period allotted to this paper I shall make no attempt to go into minute detail. I shall feel quite content if we can think together of a few of the general considerations. Life today is much more complex, much more complicated, than a generation or two ago. The work shop of forty years ago was quite different from the modern plant of today. We explain this by saying that we have progressed. This progression has been made—like many other advances—only by paying, and paying dearly, for the change. Many of us can remember the time when an employee was hurt in industry, it was just unfortunate for him that he must suffer bodily harm and lose money at the same time. Then came the day when compensation laws requiring the employer, or his insurance carrier, to pay the medical expense and also pay the injured employee for a part of the time lost. Now we are beginning to think in terms of some form of protection for the employee even during his time away from work. Just where this responsibility will end, or just where it should end, probably no man can say.

Much has been said and done about pre-employment and pre-placement examinations. As always, there are at least two sides to the question, and there are usually ardent supporters who aline themselves with each side, but often fail to recognize merit in the other side. I have no doubt but that these examinations in industry have at times been abused, and have been the door through which the employee has been—for one reason or another—tactfully shown the outside. This is manifestly unfair to both the prospective employee, the employer, and the examining physician. Management has no right to expect the

physician to do its dirty work, or to wash its dirty linen. If the physician turns down an applicant, let it be for good and sufficient medical reasons only. By this I do not mean that each applicant must be physically perfect; few of them are. I do mean that in the opinion of the examining physician the applicant—or employee—as the case may be, is physically and mentally qualified to carry on safely the job for which he is about to be employed.

This brings up the question of a suitable examining physician. That is usually a knotty problem to be solved by management. The number of available physicians from which a selection can be made is usually small; now it is exceedingly small. The best man in general practice, or the best surgeon in the vicinity, is not necessarily the wise choice. The physician to be employed either part or full time should have: (1) the respect of other reputable physicians in the community and the profession in general; (2) a sincere interest in industrial medicine and the type of medical work to be done in your particular plant; (3) a good working knowledge and general understanding of each specific job in the plant; (4) the confidence, respect and cooperation of both management and employees. He should have (a) as much knowledge as possible of the home life of each of the employees, (b) ample time at his disposal to devote to the plant. In making this statement, I have in mind the small plant that can have a physician for part-time only, (c) adequate office space and equipment, (d) suitable assistants necessary to carry on the work efficiently. This should include at least one nurse—either part-time but preferably full time.

There are many other credentials that will be found both desirable and necessary. No responsible bank or business firm doing much business would attempt to carry on for long without having its accounts audited. That service audits financial accounts and transactions. This is not only desirable but necessary. Likewise the company physician audits the health of employees, which comprises the man-power accounts and transactions, and (if possible) is of as much importance as the bank account. If you have many employees on your pay rolls at this day and time, I fail to see how you can afford to be without at least the part-time services of a plant physician—preferably full-time.

The plant physician should—of course—take care of the accident work and minor surgery. He should make pre-employment and routine examinations. He should see to it that both the job and the man are suited to each other. Especially at this time, he should utilize as many handicapped employees as can be used with safety. At the same time, he should see to it that no man is placed on any job where he will prove a menace to either himself or others. He should analyze his accidents as such. Of more importance is the analysis of the group of men in which the greater part of those accidents occur. He will quite likely find that about 15% of your employees are responsible for some 70% of your accidents. This comparatively small group of employees is today costing the greater part of insurance coverage. The company physician should be able to render assistance that will be to the best interest of all parties concerned. The necessary safeguards on machinery have been placed. Let's do the job completely and safeguard your men by pre-employment and routine physical examinations. Fit the man for the job to be done.

In the furniture industry, the main occupational hazard is dermatitis — usually resulting from certain glues or from paints, varnishes, lacquers, or solvents. Certain types of individuals are thought to be more susceptible to skin diseases than are certain other types. The physician in many instances will be able

to recognize the more susceptible ones during the pre-employment examination, and steer them into jobs that will be less hazardous for that individual. Illness, lost time, decreased production, and compensation would all be avoided by a little preventive medical practice applied at the right time and in the right place—the initial physical examination. However, some cases of dermatitis will occur.

Should a man be kept on his old job when he returns, or shifted to a new job? That is a question to be answered by the physician who is in command of all the facts in the case. No one else, in or out of the organization, is in as good position to provide that answer as the plant physician. It may here be said that some of these patients should be returned to their old job; others very definitely should not. That is a medical question to be decided on the individual merits of the case.

Another very important and timely problem in all industries today is absenteeism. The analysis of this question should be under the supervision of the plant physician. Relatively few employers know why these absences from work occur. They are entitled to this information. When obtained and analyzed, it often reveals some alarming facts. Possession of these facts would enable the employer to remedy many practices that are today proving quite expensive to industry—expensive in man hours, cold cash, and lowered production. The employee with repeated absences should be carefully studied by the plant physician, who may find during the course of his examinations evidence of early—or even advanced—organic disease. During the last ten months, it has been our privilege to make X-ray examinations of between twenty-five and thirty thousand employees in industry. These have come from both the large and the small plants; they have come from a rather wide variety of industries. This survey is still in progress, and figures are not yet available, but we have been impressed by the uniformity of the results, regardless of the size of the plant or the type of industry in question. Similar studies have been, and are being, made elsewhere.

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Table of Heights and Weights.	

CONTENTS

	Page
The School-Health Coordinating Service	3
The Child Health Conferences For Negroes	7
Supplementing A Lunch Brought From Home—An Experiment In Nutrition Education At The Elementary Level	9
The New Building For the Consolidated Board of Health of New Hanover County and Wilmington, N. C.	12
The Family Physician and the U. S. Cadet Nurse Corps	14
Eleven Ages of Man	16

THE Health Bulletin



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CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

The School-Health Coordinating Service

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ONE of the troublesome health activities and one which has lagged by reason of its difficulty is health work carried out in schools. An important cause of this slowness rests in the fact that it must be approached through two agencies, the Public Health Department and the Public Instruction Department. Each organization feels an individual responsibility which it is anxious to put into effect. Schools argue that instruction of all sorts, including health, should be the sole responsibility of the school authorities. On the other hand, health departments are interested in the child before it reaches the school and after it leaves the school, and, hence, should know what happens to the child in the matter of health while he is in the school. Both arguments have merit and are not easy to combat. School health work has been tackled by the schools independently and by the health departments independently with some degree of success in each instance, but without complete satisfaction to either organization. For a long time it was thought that these difficulties might be reconciled if a joint school-health operation were attempted. Such an undertaking has inherent difficulties, but the idea seemed to be worth a trial. After several years of work and repeated conferences an arrangement was arrived at in 1939 between the State Department of Public Instruction and the State Board of Health to

set up a joint organization to carry on all the health phases of school work. This conjoint effort was encouraged and supported by the General Education Board and by the International Health Division of the Rockefeller Foundation. The first of these organizations is primarily interested in education, and the second in public health. They agreed to support the joint experiment financially, in part, for five years, that is till June 30, 1944, and the present School-Health Coordinating Service was set up. It is a recent and probably unique State activity.

An official committee of five persons was selected to aid in coordinating the efforts of the two departments. This committee was composed of one member from the Department of Public Instruction, one from the State Board of Health, one teacher from the State University, one teacher from the East Carolina Teachers College, and one private practitioner of medicine. A Coordinator was appointed whose duties were to prepare programs and receive advice from the committee in respect to proposed procedures. He was assisted by a field working force of one doctor, three public health nurses, and one nutritionist, and three health and physical education workers. Of this group one doctor and one health and physical education worker and one public health nurse worked exclusively in the Negro schools. The Department of

Public Instruction supplied two health and physical education workers and two secretaries from its staff and the State Board of Health supplied the remaining workers from its organization.

Operations began in Stanly County in 1939, and since then have continued without interruption in varying degrees of intensity in the counties of Chatham, Orange, Person, Wayne, Halifax, Craven, Washington, Tyrrell, Hyde, Durham, and Alamance.

The objective of the school-health work is to train teachers to do a larger share of the health instruction and, in cooperation with local health departments, to facilitate and simplify the health service activities. This training was approached from three directions viz, (a) In-service training, (b) Summer Conferences and (c) Instruction in health education at the Teacher Training Institutions of the State.

In-Service Training

From the beginning this activity has taken up the time of the entire school year. Even now it constitutes the major part of the field work. As the program develops the In-Service training will become less important and will eventually be limited to revisits for conferences and suggestions. In-service work is done in county and city schools during the school year. The field unit already mentioned enters a county at the invitation of the local school, health, and civil authorities who have previously indicated their interest in the subject. With the aid of the school authorities and the staff of the health department all the schools in the county are visited. Arrangements are made to meet the teachers in groups and in individual classrooms. The instruction to teachers consists in showing them by demonstrations how to screen the children: that is, to separate them into two groups, those who need a complete physical examination and those who need little or no attention from the health officer. It is possible after a few demonstrations by the public health nurse for the teachers to do most of this work. In fact, the teacher soon finds that screening is a matter of common sense and good judgment

and requires no medical knowledge. The subjects taught and demonstrated consist of weighing, measuring, testing the eyes by Snellen chart, inspecting the teeth, nose and throat and ears, skin and hair, recognizing deformities and mental retardation, malnutrition, bad posture, and the recognition of some of the indications of common communicable diseases. None of these items is beyond the scope of common sense and can be easily mastered by any teacher after brief instruction. When the screening has been completed and checked by the public health nurse it is usually found that 10% to 15% of the children need complete examinations by the health officer. These children are then examined and referred to the proper machinery in the county for the correction of defects. The school-health work does not pretend to set up a health service in the county for the correction of defects. This is a local responsibility. It does hope to simplify the process of examination in the school in order that those who really need medical examinations will get them promptly.

Correction of Defects

This is a difficult problem but one that is not impossible of solution. It has not been developed in a satisfactory manner anywhere. Children having defects may be divided into two main groups: those whose parents are able and willing to procure and pay a physician for the necessary remedial work, and those whose parents do not belong in this category. For the first group notification of defects and suggestions for correcting them are usually sufficient to stimulate the parents to have done what is needed by the best available talent. As to the other group, it has been found possible, but usually difficult, to obtain competent attention for them if the underprivileged child be certified by a recognized authority such as the County Health Department and the County Welfare Department. When that is done physicians and surgeons generally reduce their fees, and civic organizations, such as Rotary, Kiwanis, and Lions will donate the required funds. This arrangement is a makeshift and must be repeated each year unless physicians are em-

played on a full time basis at the expense of the taxpayer to do this type of rehabilitation.

Health Instruction

Health instruction is carried on by talks and demonstrations. By these methods teachers gain information concerning communicable diseases, such as common colds, whooping cough, sore throat, skin rashes which may indicate a serious disease like measles, diphtheria, or scarlet fever, and skin infections, small pox, chicken pox, malaria, hookworm disease. It would be unwise for the teacher to attempt to make a diagnosis of the exact condition of the child, but enough information is imparted so that when something abnormal is associated with the pupil it is recognized at once. This practice becomes most important if the condition happens to be a disease which is infectious and which requires isolation until a diagnosis can be made by the health officer. Health habits, such as screening the mouth and nose when coughing or sneezing, washing hands before eating or after using the toilet, proper sleep, rest and exercise; the danger of bringing together children who are well to associate with those who are ill; a knowledge of mental hygiene and immunity are all taught as part of the health instruction. The value of good nutrition and of proper sanitation is given particular consideration.

Nutrition

Special attention is given to nutrition since good nutrition is essential to the health of children. One member of the field staff is a trained nutritionist. Her duties are to instruct teachers and children, to visit the school lunchroom, to consult with and assist the lunchroom manager in the selection of various types of foods, to advise with her concerning their preparation before serving them to the children; to look into the cleanliness of the eating utensils. She inspects the lunches which some of the children bring to school and encourages them to ask the parents to prepare foods which she recommends; she visits the homes of the children to confer with and impress upon the parents the value of proper nutri-

tion for the entire family. Children respond well to this instruction and it has a wholesome effect upon their health. For the most part the parents are cooperative.

Sanitation

It is important that the child should be reared in proper sanitary environment. Since it is improbable that good sanitation is found at the average town and county home, the school house is used as an example of what is right and proper. The teacher with the children inspects the school building and grounds in order to learn the condition of its sanitation. Inspections are made of the drinking fountains, toilets, heating, lighting, ventilation, suitable arrangements for hats and coats, and facilities for indoor recreation in inclement weather. In addition the outside grounds should be clean and if practicable decorative. This instruction, using the facilities at hand, is an effective type of teaching. If attention to any of these points is required, and it usually is, the teacher and the pupils undertake and carry through all the changes which they are capable of performing. In one school the janitor left for war work and another could not be secured. The senior high school class undertook all the janitor service of the school and their record was far superior to that of the regular janitor. In addition they kept clean and beautiful the school grounds.

Home Visiting

It is now established that the teacher cannot realize the best results from the instruction which she imparts unless she knows something of the home life of the children, particularly of those children who are not making satisfactory progress. While this is a comparatively new field for teachers, yet they have found it interesting and worth while. The public health nurses, on the Service staff as well as those in the county or city health staff, are ready and willing to assist the teachers in developing this phase of their work. Through long experience public health nurses have developed a good technique in home visiting and the teachers have found their assistance of the greatest value in developing their own home visiting approach. Appreciable results are not

yet available but teachers have responded favorably to this activity.

Organizing the County

One of the fixed purposes of the Service is to enlist the help of all the organized agencies in the county in order that they might assist in achieving the aims of the work. These agencies have a common purpose which is the welfare and health of the community, including the school children. Aside from the school and health departments, the agencies referred to are the County Medical Society, Parent Teacher Association, Farm and Home Demonstration agencies, County Nutrition Committees, Federal Security Organizations, Business and Professional Women's Clubs, and such civic clubs as Rotary, Kiwanis, Lions, as well as many others similar in organization and purpose. All these clubs respond readily to suggestions and contribute funds and give other types of help which is requested.

Local Coordinator

School-health work in the counties has been fruitful, but the complaint has been made that when the field unit leaves the county the work tends to lag. This is understandable since work then becomes the responsibility of no one in particular. To meet this criticism the Service has suggested that the county or city employ a trained person to have charge of this work who, for the lack of a better name, has been designated the "Local Coordinator". It would be necessary for her to be skilled in teaching, in nutrition, in health education and in the social sciences. She would be a person around whom activities could be centered and to whom the existing organizations could apply for assistance in putting into effect particular programs relating to the welfare of the community. The State Board of Health has agreed to pay one-half the salary and travel of a local coordinator. There are suitable candidates now being trained in the State for this purpose. It is the policy of the Service to urge counties and cities to employ a coordinator in order that it may keep up with the modern trend in school-health activities, as well as in other related activities which promote the good health of the community.

Physical Education

Physical education holds a prominent place in the School-Health Coordinating Service and is carried on in both elementary and high schools by specialists on the staff. An article will appear in a later issue of this Bulletin regarding Physical Education.

Summer Conferences

The second phase of training the teachers is the establishment of Summer Conferences. These Conferences are the only sources of instruction available to graduates unless they live in a county which has been selected for visits by the field staff. Since 1940 the General Education Board has made available a number of fellowships for study at Summer Conferences. The four schools at which Conferences are held are the University at Chapel Hill and the Woman's College at Greensboro for the white teachers; the North Carolina College for Negroes at Durham and Bennett College at Greensboro for Negro teachers. Forty in-State fellowships were provided for each institution and additional fellowships were given to ten Southern states.

At each institution the subjects taught are "Personal Hygiene", "School and Community Hygiene", "Methods and Materials of Health Education", and "Child Health Problems". In addition to didactic lectures given on these subjects by the regular teachers, outside lecturers are brought in to speak on their particular subjects. Laboratory demonstrations and field trips are arranged by the instructors. In connection with the Conference a group of 20 school children (2nd, 3rd, 4th grades) are selected from the neighborhood. They are transported to the Conference building each day at 8 o'clock and are placed in charge of teachers and nurses. The children are given two meals a day, breakfast and luncheon, and are carried back to their homes at 4 o'clock. They are kept under supervision in regard to nutrition, rest, exercise, deportment, and the acquisition of skills, including swimming, music, and drawing. Each child is "adopted" by one or more teachers who thus have an opportunity to observe as well as to put into practice the methods which were discussed in

the lectures. During this period the child is studied by the teacher and a report is prepared and submitted for criticism. All the teachers and children are given complete physical examinations. The urine, the feces, and the blood are examined. Tuberculin tests are made and X-ray pictures are taken of each teacher and school child. If untoward conditions are found, advice as to what should be done is given to the teacher and to the parents of the children.

The course lasts six weeks and successful students receive six semester hours credit.

Attendance at the Conferences for 1942 and 1943 was as follows:

	In-State		Southwide	
1942	White	80	White	15
	Negro	84	Negro	22
1943	White	48	White	17
	Negro	85	Negro	13

Teachers Colleges

It is the purpose of the State authorities eventually to include courses in education as an integral part of the curriculum of all teachers colleges. The four institutions previously mentioned are already making plans to that end. When these courses are included in the curriculum, teachers will be equipped on graduation to do the screening and other duties already described. The in-service training will then gradually recede but the summer schools will continue to become of increasing importance.

The Child Health Conferences For Negroes

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ONE of the major activities of the School-Health Coordinating Service during the last four years has been the promotion of Child Health Conferences at the North Carolina College for Negroes in Durham and Bennett College in Greensboro. The School-Health Coordinating Service has cooperated with these institutions conducting four conferences at North Carolina College and two at Bennett. All have been made possible by grants from the General Education Board.

The purpose of these conferences is two-fold. First, it aims to give to in-service teachers and health workers a practical approach to interpreting and solving health problems in their respective schools and communities; second, it attempts to demonstrate to colleges and teacher-training institutions the feasibility of developing well-coordinated, full-time health education and health service programs.

There has been a steady increase of enrollment of teachers and health workers. This

may be attributed to two factors: first, the field work conducted by the School-Health Coordinating Service during the school term; second, the increasing demands for admission from teachers and health workers in other southern states.

For the four-year period, 1940-1943, the aggregate attendance at North Carolina College was 121 in-state and 32 out-of-state members representing 11 southern states. The two Bennett conferences held in 1942 and 1943 had an aggregate attendance of 80 in-state and eight out-of-state members representing six southern states. The states represented were North Carolina, Tennessee, Georgia, Virginia, Florida, South Carolina, Alabama, Mississippi, Oklahoma, Kentucky, and Texas.

The following professions were represented in the membership of the conferences: teachers, physicians, dentists, and nurses.

*Attached to School-Health Coordinating Service for work in Negro Schools.

The program of the conferences consisted of (1) Formal instruction, (2) Conference periods, (3) Guest lectures, (4) Field trips, (5) Visual education, and (6) Demonstration projects.

The courses of formal instruction included: (1) **Methods and Materials of Health Education**, dealing with the various methods of health instruction and the contents and sources of health materials; (2) **Child Health Problems**, treating the growth and development of the normal child, the common diseases and disorders of childhood, nutrition and mental hygiene; and (3) **School and Community Health Problems**, emphasizing community and school sanitation and other community health problems including those diseases most common among Negroes.

In order to facilitate the study of the various problems presented, small conference groups were designed to consider (1) Health programs for elementary schools, high schools, colleges and communities, (2) Nutrition, (3) Oral Hygiene, (4) Tuberculosis control, and (5) Venereal disease control. Each group discussed the subject assigned and prepared a manuscript recording its findings and proposing a practical program for the particular problem.

To acquaint the members of the conferences with the various cooperative forces in health, education, and community work, various leaders in these respective fields were presented as guest speakers.

To familiarize the group with the various facilities provided for the protection of the health of the community several field trips were made. These included visits to dairies, sewage disposal plants, water filtration plants, and health departments.

Visual education techniques were used extensively to provide a pictorial record of achievements and to demonstrate the usefulness of photographs, motion pictures and illustrative materials in the teaching of subject matter.

In connection with these conferences demonstration projects for underprivileged children were held. Sixty of these children, thirty in each school, were selected by nurses and school

physicians of the Public Health Departments of the cities of Durham and Greensboro. All were undernourished. In addition to this many had defective vision, skin diseases, diseased gums, and dental defects.

The demonstration projects served a two-fold purpose: (1) to acquaint teachers with a minimum health service program for the schools and (2) to demonstrate the value of adequate nutrition in improving the physical and mental health of the child.

The demonstrations in the health service program were designed to help the members of the conferences to recognize signs of health defects and disturbances. The procedures used in giving this information were by demonstration and participation. In order that these demonstrations might be of highest value, each member selected a child to screen and study for the six weeks. She weighed and measured her child and studied his general nutritional status along with posture, teeth, signs of acute infection, skin diseases, color, mental attitude and nervous stability. The hearing and visual acuity tests were also given. The members were taught to record these findings on school health cards.

To create a more intelligent understanding and to study the child as a whole, nurses of the City Health Departments furnished the members with information concerning the social and economic background of the children.

The daily routine activities were as follows: Upon entering the school, the child was inspected. This inspection was a brief check-up of each pupil to see whether he appeared sick or well from general observation. After this procedure the children went to the washroom and prepared for breakfast. After breakfast toothbrush drill and health talks were given which proved very beneficial. Other periods were allotted for play, song, rest, art, dramatics, and relaxation. During the day each child's behavior and manners were observed and every opportunity was utilized to teach health in a practical manner.

The members were given an opportunity to observe the effects of improved nutrition on the underprivileged child. It was observed

that with proper nutrition there was a general gain in weight up to as much as six pounds. Furthermore, a general improvement in physical and mental health was noted.

Practically all the dental defects were corrected by dentists from the division of Oral Hygiene of the State Board of Health. Those children showing need for medical care were referred to their family physicians and to the Health departments.

To evaluate the work of the conferences and for future planning a simple questionnaire was submitted to the members of the conferences requesting them to evaluate and

criticize the courses. A review of these replies revealed that greater interest was manifested in group conferences and in the demonstration projects. From the findings of this year and of the previous years it appears that the members are not so much interested in formal instruction but in the practical applications of health procedures and techniques that they may utilize advantageously in their schools and communities.

It appears that the Child Health Conferences should be organized more on a workshop basis where the individual may have a definite problem and the machinery set up for helping him to solve it.

Supplementing A Lunch Brought From Home—An Experiment In Nutrition Education At The Elementary Level*

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MANY times the statement is made that the need for a school lunch is now universally accepted but when the number of schools without adequate eating facilities is considered, this statement seems unduly optimistic. A great deal of progress has been made by the schools and community agencies in the establishment of school lunch rooms and school cafeterias and in the provision of free food for needy children. In many instances the individual classroom teachers have contributed much to the feeding program. Pleased with this progress as we may well be, still it is discouraging to find many schools throughout the country, especially in the rural areas, where no provision at all is made for a mid-day meal for children, and where no particular interest is exhibited in the problem.

The school lunch program of the WPA was most effective in bringing a noon meal to

many schools, both rural and urban; however, even when the WPA functioned most extensively, many schools were not reached. Now that the WPA program as such has been discontinued, the school and community must face an even greater responsibility in seeing that children are given an opportunity to have adequate food at the noon period.

There are a number of ways in which this problem can be handled satisfactorily in the school if the need for a noon meal is completely appreciated. Many schools all over our nation are showing ingenuity in dealing with the problem while many communities and many agencies (local, state, and federal) are

*This work was carried out under the auspices and direction of the several Departments of the Woman's College of the University of North Carolina, in cooperation with the Greensboro Health Department, Greensboro Schools, North Carolina School-Health Coordinating Service, and the General Education Board.

rendering valuable assistance. But far greater effort must be made to reach all the schools where malnourished pupils give evidence of the crying need for an adequate lunch program. Malnutrition is almost certain to result if a child goes through all the school hours without food or without food which is adequate for his growth needs.

In many families dinner is served at noon-time so that the school children miss the family meal most likely to supply a good share of their nutritional needs. When the family diet is inadequate, as is too frequently the case to judge from dietary surveys, the omission of this mid-day meal is a real health hazard.

Children as well as their parents often will refuse to eat the foods essential for their well being because they think they do not like these foods. In this connection the educational value of the school lunch is vitally important. In childhood, before diet habits are firmly established, a good school feeding program proves of inestimable benefit. Children become acquainted with common, economical, and nutritious foods, and in the company of their fellow pupils, learn to eat them. Learning in addition to appreciate the special body building values of certain foods, they form good eating habits.

As it is far easier to form than reform, the elementary level is seen as one of the most fertile fields for nutrition education. A lunch for the elementary school age child is urgently needed both for its educational value and its nutritional contribution. Where regular lunchroom facilities are not available, the individual elementary classroom teacher can do a great deal to help her pupils form good food habits as well as improve their nutritional condition.

Mindful of this vital role which the elementary teacher can play, the supplementation in the classroom of a lunch brought from home by the pupils was selected as a problem for study at the Child Health Laboratory at Woman's College of the University of North Carolina this past year. It was hoped that this study would yield suggestions which might be of value to the elementary teacher.

Elementary children with health needs coming to the Child Health Laboratory at the Woman's College of the University of North Carolina exhibited many signs of malnutrition. Both school consultations and home visits revealed that the diet habits of a large proportion of these children were faulty. Lunchrooms and cafeterias are available in the Greensboro schools which the children regularly attend, but it was discovered that many of these children had not been using these facilities. Some of them were in the habit of bringing something from home.

It was agreed by the nutrition specialist, the elementary teacher and the nurse at the Child Health Laboratory that it would be worthwhile to see if it were practical for an elementary teacher to provide supplementary food in the classroom at lunchtime, and if such a project could be made to have educational as well as health benefits. All three individuals worked together in attempting to answer such questions as these: What are some ways of motivation? On different grade levels, what effective pupil participation can be expected? How can group planning and sharing, division of labor and individual responsibility be fostered? Which foods best serve the purpose? What equipment is necessary and practical? What reading materials adapt themselves to the problem? What integration with class work at each grade level is possible? How can other phases of health education be related to the nutritional problem? Can this project be a means of sensitizing parents to food habits and of helping the family to adapt its present food pattern for the best health of the child?

Successively, the project was carried out with children from the second, the third, the fourth, and the fifth grades of the elementary school. Children of each grade appeared interested in the project, and extensive pupil participation was found possible at even the lowest grade level.

The elementary teacher talked with the children about bringing a lunch from home for the first few days of their stay in the Laboratory. A sheet was sent home, describing

what comprises a good lunch, and offering suggestions for using non-rationed and relatively plentiful foods in sandwich fillings.

The children brought each day one or more sandwiches from home to provide protein, consisting of meat or meat mixtures, fish loaf or salad mixtures, bean mixtures, peanut butter, egg or egg mixtures, or cheese. They also brought homemade cookies or gingerbread.

In supplementing the food brought from home, use was made of simple, economical, and nutritious foods. In so far as possible, relatively abundant foods were used often and rationed ones less often. Milk was supplied to the children every day, and one cooked or prepared dish. The prepared dish was frequently a soup during the winter months. Several variations of vegetable soup were used. Sometimes a dried vegetable soup was used as a base and some other vegetables added. Canned tomatoes, of course, were a desirable addition. Sometimes the children cut up fresh carrots, celery, onion, and other vegetables for the soup. The children seemed to enjoy a soy bean soup which they made. Some dried beans were put to soak the afternoon before and simmered during the morning, and when the beans were cooked, tomatoes and onion were added.

On some days, the children were requested to bring a piece of raw vegetable, such as carrot, turnip, spinach, cress or cabbage, and the contributions including the carrot tops, pooled into a salad which was enjoyed by all, when a little vinegar and oil or lemon and oil dressing was added with pepper and salt. Or the salad was often a fruit one, containing some apple and orange and nuts contributed by different pupils. The variations possible were many.

One fifth-grade girl had a collard patch at home and occasionally contributed 'enough for everybody'. Other vegetables were also cooked in the classroom, including turnip greens and yellow squash.

In order to encourage the use of whole wheat baked goods, a sample of wheat or graham flour was sent home with the children with some tested recipes for its use. It was found that in the case of the fifth graders,

the children themselves used this flour to bake muffins, biscuits, or cookies to bring back to school in their lunch bag or box. It was the mother of the younger children who made bread or gingerbread or cookies with the flour.

The menus for the week were planned jointly by the teacher and the children, with advice from the nutrition specialist. Some of the actual lunches eaten by different children included: peanut butter sandwiches on whole wheat bread (from home) with milk, fruit salad, and soy bean cookies; salmon salad sandwiches with milk, vegetable soup, and apple; liver loaf sandwiches with milk, collards, and orange; egg sandwiches with milk, soy bean soup, and apple; bean mixture sandwiches with milk, vegetable salad, and gingerbread.

The children were weighed each week and kept growth charts. The eating of a good lunch was linked by the teacher to the gain in weight observed after a week or more at the Laboratory. Explanations given were dependent on the grade level and the interest of the children. With older groups some comprehension of calories, proteins, minerals, and vitamins was possible. Fifth graders played a game to see whether or not their food eaten at home and at school supplied all the minerals and vitamins their bodies needed for growth and vigor. Children making a poor score at first were able later to reach the top of the class in scoring by eating greens or some other highly protective food rich in the previously lacking factors. Consumption of high scoring foods was increased both at school and at home.

Specific duties were allocated to different children and these duties alternated. The actual preparation of food was done in a kitchen-corner of the classroom by two young cooks, who wore 'chefs' aprons, and cooked greens, or made soup, or cut up salad with a will under the teacher's guidance and direction. There were a number of helpers having assigned duties. Two waitresses set the tables and placed the food upon them. With primary groups, small tables served both as desks and lunch tables, while with older groups, regular

desks served the double purpose. The children designed and made their own paper mats. After everyone was served one child asked the blessing (each taking a turn) or sometimes the entire group sang the blessing.

When all were through eating at his table, each child carried his own dishes to the serving table and designated helpers washed the tables, and did the cleaning up. Then the children went to the washroom to brush their teeth before their after-lunch rest period.

Cleanliness was stressed at all times. Such topics as washing hands before touching food, and unnecessary handling of food, as well as courteous table manners, pleasant conversation at mealtime, proper eating techniques, and learning to spend money economically (in the case of older children) stem from the experience of preparing meals.

Not a great deal of equipment was needed. One single hot plate, one large cooking kettle, one mixing bowl, one long handled spoon, one kitchen knife, one pair of kitchen shears (ordinary scissors could be used) for cutting up greens; plates, soup bowls, spoons, and glasses were used in the preparation and serving of the lunch.

Integration of all school subjects was possible in the lunch unit. In arithmetic the children worked problems which arose in a natural situation such as figuring the amounts

of food needed, the cost of foods, cost per serving, the number of napkins needed, places to set, and so on. Reading skills were practiced in daily lessons from various books on topics pertaining to the foods we eat, their production, and where they grow. Social studies played an important part in the curriculum when the question of food on different levels was studied; the level of necessity, the level of aesthetic beauty, the level of sharing with others, the level of religion and so on. Music found its place naturally in the program, while many opportunities for creative expression in art were presented.

Physical education of a therapeutic nature formed an integral part of the daily program at the Child Health Laboratory, and the children learned that we need foods of different kinds to build muscles and physical exercise to train these muscles. Very decided improvement in posture was observed in many children during the six to nine week stay in the Laboratory. Weight increases were notable in almost all cases. Other improvements were noted by teacher and nurse, including increased ability to relax, increased alertness, the practice of better habits of cleanliness, and evidence of pride in personal appearance. Home visits made after the children had left the Laboratory indicated an improvement in family eating habits in many instances.

The New Building For the Consolidated Board of Health of New Hanover County and Wilmington, N. C.

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THE Consolidated Board of Health of New Hanover County and the City of Wilmington, N. C., moved into its new building on July ninth. This red brick building, the outside dimensions of which are eighty feet by forty-three feet, is located on Fourth Street, between Market and Princess Streets, on a lot which is part of the court house block.

It was constructed by the Federal Works Administration, which leased the lot and built the building at a cost of approximately thirty thousand dollars. As soon as details of construction are completed, the lease will be terminated and the lot and building will be turned over to the county. Lynch and Foard, of Wilmington, were the architects for the

building. The contractor was the firm of Ballou and Company, which has a branch office in Lumberton, N. C. All facilities, such as water, heat, sewer, etc., will be extended from the court house.

The history of the Health Department has included several moves, each of which has given it increased space. The city established a health department in 1911, under the direction of Dr. Nesbitt; this department had offices in the City Hall. In 1913 the General Assembly of North Carolina enacted a law giving a special charter to the Consolidated Board of New Hanover County and the City of Wilmington. At this time the office was moved to the basement of the County Court House, first occupying the space where the County Welfare Office is now located, and later taking over more space, including that now occupied by the office of the Associated Charities. Dr. Lowe was Health Officer from 1915 until 1919, when Dr. John H. Hamilton took the position. In 1926 the department moved into the space on the first floor of the Court House, where it remained until the present move. Some of the space downstairs was retained for clinic and in 1937 additional space in the basement was given to the clinic. Dr. A. H. Elliot, present Health Officer, was elected in 1931, when Dr. Hamilton joined the staff of the State Board of Health.

The new building has two stories. Because of the contour of the ground, the front of the upper floor is at street level. On entering the main entrance of the upper floor, on Fourth Street, through a lobby, the general office is found on the left. This office contains the information desk, and working space for the department of vital statistics. This floor provides private offices for the Health Officer, for the supervisor of nurses, for the secretary, and general offices for the nurses, for the sanitarians and the health educator.

Most of the lower floor is given over to the clinics. In addition to a large waiting room, which is entered directly through the rear entrance, there are numerous examination and treatment rooms. The remaining space on this floor is taken up by an office for the malaria

control staff, a fluoroscope room and a store room.

The general public health laboratory and the venereal disease laboratory will remain in the court house, where they will take over some of the space formerly occupied by the clinics. The medical clinic and drug dispensary for the indigent sick will also remain at the court house.

Along with the increase in space occupied by the Department have come increases in personnel. For example, up to 1918 there was only one public health nurse, who was assigned to the city. In 1918 there were five public health nurses in the city; one supervisor and four staff nurses. The first county nurse joined the department in 1920. At the present time there are, in addition to the supervising nurse, six white and two colored staff nurses in the city, two white staff nurses in the county, one clinic nurse, and five nurses who work in the venereal disease clinic. The salaries of two of these nurses are paid by private organizations; the others are provided from public funds. There have been similar developments in the work of the sanitarians. There are now nine sanitarians and one plumbing inspector on the staff.

The recent increase in the population of the city and county and the many problems of a war area made new and enlarged quarters for the department necessary to the maintenance of efficient service. The population of the city has increased from 33,000 in 1940 to approximately 80,000 at the present time. As estimated by the Greater Wilmington Chamber of Commerce; the total population of the city and county has increased from 47,000 to an estimated 120,000. This increase and the influx of armed forces have made expanded services necessary. Much of the new space and equipment for laboratory and clinics has been made possible through the venereal disease program. The installation of new laboratory equipment and the addition of one technician and one technician's apprentice will make possible more complete laboratory service than has been available before.

The malaria control program has been largely taken over by USPHS personnel, there

are thirty-two members of this staff, working in cooperation with the health department. Three members of the department are also working on the malaria control program, principally in the city.

The health department conducts a busy program of clinics. There are fourteen clinics weekly for the diagnosis and treatment of all venereal diseases. Contraceptive clinics are held for white and colored; prenatal clinics are held five times a week. Examinations for food handlers are made twice a week. Fluoroscopic clinics are conducted twice a week; when necessary, this examination is followed up by X-ray. Immunization clinics are held weekly

at the health department and others are held in various parts of the city. Baby clinics are also conducted out in the city.

The increased population and many problems of the war area have also extended the education activities of the department. A trained health educator has been added to the staff and is carrying on an extensive program through the community organization which has been developed. Meetings with film showings on such subjects as restaurant sanitation, nutrition, malaria control, and rodent control are held for many lay groups, in addition to the other professional work of the health educator.

The Family Physician and the U. S. Cadet Nurse Corps

By DR. THOMAS PARRAN
Surgeon General
U. S. Public Health Service

THE needs of the war effort make imperative a considerable increase in the number of nurses for essential civilian and military nursing services. To aid in meeting this need, the Congress, in passing the Bolton Act, has created the United States Cadet Nurse Corps.

It is natural that young women who contemplate joining the Cadet Nurse Corps will turn to the family physician for advice and guidance on this matter. In pointing out to the prospective cadet nurse some of the reasons why she is needed and how joining the Corps will benefit both herself and her country, the physician on the home front will be making still another patriotic contribution to the prosecution of the war. Furthermore, it is to the physician's own interest to stimulate recruitment, since as his load of work becomes heavier, nurses can be of increasing assistance to him not only in hospitals, but also in his office and in his patients' homes.

To aid the physician in giving counsel which is specific and which will lead to action on the part of the Cadet Nurse candidate, the following suggestions are offered.

The Bolton Act

In essence, the Bolton Act provides for grants-in-aid to nursing schools whereby the student nurse is relieved of the burden of tuition, fees, and other expenses which she ordinarily would have to meet herself, and in addition, she is paid a monthly stipend. Schools participating in the program will continue to select their students and to plan and operate their own curriculum. Certain broad requirements are specified with regard to minimum standards of nursing education, acceleration of the curriculum, and agreement by each cadet nurse that she will continue in military or essential civilian nursing service for the duration of the war.

The effect of the Bolton Act will be to produce more nurses by stimulating recruitment of students and by speeding up training. Recruitment of student nurses has met severe competition from the many opportunities available at present to high school graduates, especially in the uniformed services and in war industry, where pay is immediate without further training. Allotments of funds to the

nursing schools will aid in meeting this competition, and will further assist the schools in accelerating their curricula so that training will be more rapid.

Need for 65,000 Student Nurses

Several factors have combined to create the present shortage of nurses. Sixty-five thousand new students in our nursing schools this year has been set as the goal to help relieve this shortage.

Student Nurses Release Graduates

By recruitment of an increased number of students and providing an accelerated curriculum the program will enable student nurses to fill many of the needs in hospitals and to release graduate nurses for military and civilian war services.

Civilian Hospitals

More people are being hospitalized. Hospitalization saves the physician's time, and civilian physicians are fewer in number and busier now than ever. More people are having babies. The financial burden of hospitalization is less than formerly because people have higher incomes and because of increased use of hospital insurance. Full hospitals need more nurses.

Military Service

A large number of nurses have already joined the Army and Navy and many more are needed as the strength of our forces increases—the current requirement is 2,500 nurses per month.

Public Health

Crowded living conditions in war-boom areas require increased efforts to safeguard the health of civilians. Public health nurses are key workers in this program.

Industry

The great increase in war industry requires more nurses for plant preventive and first-aid services.

United States Cadet Nurses

Recognition of War Service

By the distinctive outdoor uniform, bearing the insignia of the United States Public Health Service and of the United States Cadet Nurse Corps, the cadet is identified as being engaged

in an activity recognized as of vital importance in the war effort.

Professional Training

Unlike those working at many war jobs, the cadet receives full training and standing in a profession which will be permanently useful, both to herself and to society.

Financial Freedom

Full tuition and maintenance, including the uniform, are furnished the cadet, and in addition she receives a regular monthly stipend which, although too small to attract those interested primarily in monetary return, is yet sufficient so that no girl need be deterred by financial obstacles from seeking a nursing education. Stipends will amount to \$15 per month during the first nine months of training, \$20 during the next fifteen to twenty-one months, and \$30 or more for the six to twelve months remaining before graduation.

Choice of School

The prospective cadet is free to enter the nursing school of her choice, provided only that the school is participating in the program, and that she herself is able to meet the scholastic, personal, and physical requirements of that school.

Choice of Job

While the cadet is required to agree that after graduation she will continue in essential nursing for the duration of the war, it is to be emphasized that she is not compelled to enter military service. On graduation, she is free to choose among the military services and numerous civilian nursing activities. It is to be noted that Army nursing and many civilian positions are open to married nurses. Whether or not a cadet may marry during her training is dependent entirely on the regulations of the school in which she is enrolled.

Joining the United States Cadet Nurse Corps

Application to Nursing School

The young woman who is interested in joining the United States Cadet Nurse Corps should inquire from the nursing school of her own choice as to whether it is participating in the program. She must be a high school graduate; other admission requirements vary among individual schools.

Choice of School

It is suggested that it may be recommended to prospective cadets that they obtain catalogs of at least three schools before making a final selection. A booklet entitled "Nursing and How to Prepare for It" will prove helpful to young women and may be obtained free from the National Nursing Council for War Service, 1790 Broadway, New York, New York.

Lists of Nursing Schools

Lists of the 1,300 nursing schools in the United States which are accredited by State Boards of Nurse Examiners are also available from the National Nursing Council for War Service. The State Board of Nurse Examiners can supply a list of the schools in each state.

Hospital Number, J.A.M.A.

For convenient reference by physicians attention is called to the fact that the annual Hospital Number of the *Journal of the American*

Medical Association (the 1943 edition is dated March 27) indicates, in its list of registered hospitals, those having an accredited nursing school.

Further Information

Articles on the United States Cadet Nurse Corps are appearing currently in medical, nursing and hospital journals.* Local nursing schools, the State Leagues of Nursing Education, or the Division of Nurse Education, U. S. Public Health Service of the Federal Security Agency, Washington 25, D. C., can supply additional information.

Physicians are urged to utilize every means to stimulate interest among young women in this new opportunity to aid in meeting an urgent war need.

*Parran, Thomas: New Program to Provide Training for Nurses. *J.A.M.A.* 122, 752 (July 10, 1943).

ELEVEN AGES OF MAN

1. Milk
2. Milk and bread
3. Milk, bread and spinach
4. Oatmeal, bread and butter
5. Ice cream soda and hot dogs
6. Minute steak, fried potatoes, coffee and apple pie
7. Bouillon, roast duck, escalloped potatoes, creamed broccoli, fruit salad, divinity fudge, demi-tasse
8. Pate de foies gras, weinerschnitzel, potatoes, Parisian egg plant, a-Yopers, demi-tasse, and Roquefort cheese
9. Two soft poached eggs, toast and milk
10. Crackers and milk
11. Milk.

Journal of the Michigan State Medical Soc.

It takes humanity a woefully long time to profit by the wisdom of its prophets.—Edith Roberts.

Real joy comes not from ease or riches, nor from the praise of men, but from doing things worth while.—Sir Richard Greynville.

We do not stop playing because we grow old. We grow old because we stop playing.

—Herbert Spencer.



Sadie Mae Ruff, 6 months old, daughter of Mr. and Mrs. Roy Ruff of Mill Spring, North Carolina. The Health Bulletin and other health publications are given credit for helping this young lady get off to a good start.

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STATE LABORATORY OF HYGIENE FARM

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The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils
 Appendicitis
 Cancer
 Constipation
 Chickenpox
 Diabetes
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 Don't Spit Placards
 Endemic Typhus
 Flies
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 Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.
 Prenatal Letters (series of nine monthly letters).
 The Expectant Mother.
 Breast Feeding.
 Infant Care, The Prevention of Infantile Diarrhea.
 Table of Heights and Weights.

Baby's Daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
 Diet List: 9 to 12 months; 12 to 15 months. 15 to 24 months; 2 to 3 years; 3 to 6 years.
 Instruction for North Carolina Midwives.

CONTENTS

	Page
Physical Education In The School Health Coordinating Program	3
A Project In Body Mechanics For The Classroom Teacher	6
Malaria Control—A Cooperative Venture	9
News Release	11
Notes & Comment	13

Physical Education In The School Health Coordinating Program

By CHARLES E. SPENCER, Adviser

Physical Education School, Health Coordinating Service
Raleigh, North Carolina

IDEAS of the time and place have ever shaped and fashioned all parts of education, and so physical education is given more emphasis today in the eyes of the public and school administrators than ever before. Why has physical education taken this place today? The war has brought about changes and the Armed Forces have needed physically fit men to meet this emergency. It has been stated by both Army and Navy officials that the length of training for these boys would have been cut in half if they had been physically fit prior to their call to service. We not only need physically fit people to serve in the Armed Forces, but we also need them at home, on the farm, and in the factory. The term physical fitness implies freedom from disease or significant deviations from the normal structure and function, sufficient strength, speed, agility, endurance, and skill to do the daily task; and mental and emotional balance and flexibility appropriate to the individual. Fitness has limitations imposed by inheritance but within these limitations daily living practices may develop and otherwise influence fitness.

The significant fact this brings out is that physical education should have been considered an important phase of education years ago. People need to be physically fit just as much in time of peace as in times of war. If physical education had been given proper emphasis

from the first grade through the high school since the last war the nation would now be better prepared to meet the present emergency, but in many schools physical education has, more or less, been the red-headed-stepchild in the school curriculum. Administrators and teachers have included it when and wherever they have found time in the curriculum after scheduling all other subjects, and for the most part it has been omitted entirely. Why has it been put at the bottom of the ladder? The answer sometimes is lack of facilities, sometimes lack of trained personnel, but in the main it is because the general public, parents, administrators, and teachers have not realized the importance of physical education and the place that it has in the development of the whole child. Parents have often thought and said that they sent their children to school to learn and not to play. Others have maintained that their children could exercise at home mowing the lawn or doing some other kind of work. It is true that the nature of physical education implies play and exercise but these are insignificant when one realizes the many other values that physical education has to offer.

It has been stated that the purpose of education is to provide experiences that will enable the individual to find a place in our democratic society in which he can participate with intelligence and satisfaction both to himself

and to society. In education the "whole child" should be educated, and to provide for this, the program must offer the individual a vast number of life situations and experiences. No other subject in the school curriculum offers as many real situations and experiences as does physical education. It is a planned program of instruction and participation in big muscle, nonvocational, physical activities that tend to favorably affect modifications in knowledge, skills, habits, and attitudes. Physical education may then be defined as education through the physical rather than of the physical.

The aim of physical education is to provide opportunities for the individual to develop physically, mentally, and socially that he might live efficiently and happily in society and contribute toward its improvement. Health, happiness, and character are qualities of primary importance. Physical education contributes to health development by providing activities which redevelop neuromuscular skills, organic fitness, growth, strength, and vitality. It also provides ways and means for a child to put into actual practice wholesome health habits. Besides the health objectives in physical education there are social objectives equally as important. In physical education activities there is training for character and good citizenship through the development of good sportsmanship and fair play. There is no other place in the school curriculum that offers a better opportunity for the development of initiative, self-control, a sense of loyalty, leadership, followership, fair-play, and cooperation than is found on the playground during a physical education period.

In recent years there has been much talk about the social and ethical values of physical education. It should be emphasized, however, that character education and personality development are only potential outcomes of physical education. The play field, while offering splendid opportunities for experiences in good sportsmanship, under the wrong leadership or under no leadership might be the breeding place for poor sports. In physical education activities, how an activity is taught

is no less important than what is taught. Since this is true we must assume that upon the qualifications of the teacher depends, in a large measure, the real educational values of physical education.

Many teachers have had little or no training in physical education but they are called upon to teach it. This is especially true of the classroom teachers of the elementary schools. The purpose of the physical educators of the School-Health Coordinating Service is, therefore, to help train teachers in physical education so that they can bring out the real values that are potential in physical education.

Many of our progressive schools have well organized physical education programs but unfortunately, because of lack of interest in some instances and in others because there is no one on the teaching staff to organize the program, there is no resemblance of a physical education program. These schools probably have recess periods where the children are given a few minutes out-of-doors, but for the most part the children are just turned out to do whatever they so desire to do. They are given no instruction in how to play and as a result Johnny is picking at Jimmy, two or three other boys are fighting and rolling around in the sand or mud; and the girls are off in little groups just standing or are fussing. It is true that there may be a little value in the sunshine and fresh air they get from such a period but you cannot say this is a beneficial physical education period.

In some schools it becomes first necessary to sell the program to the administrators while in other communities the public has to be informed with regard to the aims, purpose and values of physical education.

The question has often been asked how the physical education advisers go about setting up physical education programs in the cities and counties in which the School-Health Coordinating Staff works. In the first place a meeting is held with the superintendent and the principal in order to acquaint them with the aims and objectives of the program and the nature of the work which is to be carried on in their school. The first visit is made to

the school for the purpose of finding out if the school already has a physical education program and if so what kind of program. This is done by making a survey of the school which includes the number of periods per week in physical education, length of periods, available space for playground, equipment, types of activities being taught, training of the teachers, and schedules of the physical education periods. In order to build a program you must have a foundation upon which to start and this will give one an idea of just where to start the new program. If physical education is already included in the curriculum then the period is observed in order to see what types of activities are being taught, the organization of the class period and methods that are being used.

A meeting is usually held with the principal and teachers after school and the important aims and objectives of physical education are explained to the group. Many of the teachers have had no specialized physical education training and probably have never thought that there might be a very good reason for having a physical education period every day or that an instructional period in skills is more educational than just a free play period or recess. The understanding of why we should do a certain thing often stimulates one to try harder. Quite frequently when a teacher comes to understand the values inherent in a well-planned physical education period she is stimulated to see that these values or objectives are met. Other topics such as ways of organizing the class period, scheduling the periods in order to make the most of the available space and equipment, types of activities that need to be included in a well-rounded program and program planning are discussed with the teachers.

On the next visit to the school, demonstration classes are taught in each grade. There is a big value to be gained from this. The teacher has a chance to observe the methods used in organizing the class, and the methods that are used in teaching the activity. Quite frequently she joins in the class and takes an active part thus learning to do the activity

herself. Often when one learns to do a simple folk dance or learns a game it serves as an incentive to learn something else and gives a self-confidence in conducting physical activities which she might not have had before. At least two demonstration classes are taught for each grade, one in rhythmical activities and the other in out-door activities which include relays, ring games, and team games. At the end of these classes, suggestions are given to the teachers with regard to different activities suitable for their grade level, games that can be used in the classroom during rainy or inclement weather, and kinds of equipment and how it can be improvised. Frequently the teacher will ask for a conference after school for further help in organizing and planning her program.

Revisits are made to the schools to help the teacher solve the various problems that she has encountered with her program. Often they are due to the organization of her class, or the wrong selection of activities. Many times teachers want to put on special programs such as May Days, Play Days, and Field Days and therefore request help in planning and conducting a particular program. In the high school the girls have probably become interested in team games and would like to have help in organizing an intramural program for them in order to develop further their skills and interests in a particular sport. Help is also given in correlating health and physical education with other subjects.

The school administrators and teachers are not the only ones who need to be sold on the value and place that physical education should have in the school curriculum. Parents and other citizens need this information as much as any other group. These are the tax payers and it is through their interest and help that equipment may be secured, buildings improved, and personnel employed.

Interested citizens can also exert much influence in making curriculum revisions more nearly in terms of the needs of the boys and girls. Whenever the opportunity arises the physical education advisers speak to Parent Teacher Associations, civic clubs and other

organizations or agencies on the importance of physical education as one method of community education with regard to the needs of children.

The physical education programs as promoted by the School-Health Coordinating Service may be summed up as an in-service training for the teachers in the area of physical education. Since interest may be said to be the key to learning, the creation of a genuine interest on the part of the teacher and pupils with regard to physical education is likely to result in the achievement of the

potentialities that are inherent in a well-organized and conducted physical education program. "The enrichment of life is the test of worth." The real test of the worth of any subject is its power to enrich life. The contributions it makes to the individual life gives it social significance. When physical education is administered and conducted on a plane such as to achieve these aims and objectives, then and only then will its test of worth be proven. Physical education then will take its place as an integral part of the school curriculum.

A Project In Body Mechanics For The Classroom Teacher*

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and

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IN recent years body mechanics and posture instruction have been little emphasized by the classroom teacher and the physical education teacher while other phases of education have been receiving special emphasis.

Body mechanics includes much more than a good standing position. It includes carriage in walking, proper positions of all movements whether picking up a suitcase, shoving a table, or throwing a baseball. Because the human being is constructed as he is, there is an efficient method for every type of movement, thereby using the least energy to accomplish the act efficiently.

Since the body is composed of segments rather than one piece, it is necessary that the body parts be balanced one on top of the other if an upright position is to be maintained. If one part is out of line on one side, another part must adjust itself out of line on the other side to keep the body from falling. It is common knowledge that muscles hold the body

upright. If muscular development is poor, the parts will not be held in line. Observation shows that children with poor nutrition, insufficient rest, and little exercise have imperfect positions. Even children who have proper nutrition, rest, and hours of play may have faulty positions.

It is felt that all children should have the opportunity to develop physically and establish proper habits in manipulating the body as well as have the opportunity to develop mentally. It is unforgivable for educators to be so enthusiastic over development of the mental processes that children are allowed to slump day after day, month after month, and year after year with only an occasional ill-stated admonition to "throw your shoulders back," and "throw out your chest." According to

*Sponsored by the Woman's College of the University of North Carolina, North Carolina School-Health Coordinating Service, Greensboro City Schools, Greensboro Health Department, and the General Education Board.

Wolf's Law of bone growth, it has been found that bone tends to take the shape in which it has been pulled by muscle tension when the positions are held for long periods of time. Sitting on the base of the spine with only the upper back touching the chair places the spine in a rounded position for the entire length. The muscles on the back of the neck and those lying along the spine (erector spinae) become stretched and weak. The child assumes the position so often that he feels comfortable in this fatigue slump. He stands with head forward and upper back round. He has an exaggerated hollow appearing in the lower back to help to maintain the balance of the protruding round upper back, a prominent abdomen, and his pelvis is tilted forward. The feet of such an individual are usually used poorly with toes turned out and weight on the inside of the longitudinal arch. He walks on them but not with them, as Helen Denniston, M. D., Associate Professor of Physical Education at the University of Wisconsin has often commented.

Poor habits of sitting, standing, walking, lowering and rising from a seated position, picking up an article from the floor, lifting a heavy object, performing household tasks, as well as other actions, are found prevalent among children and adults everywhere. Some of these poor habits may be due to imitation and some are habits which the individual has added to his own detriment. Many are due to faulty positions allowed in school while busy at school tasks. Others are due to the environment of today. Few children have the opportunity to climb trees, hang from barn rafters, and climb ropes as many of our parents were able to do a generation ago. Consequently muscles between the shoulder blades are weak. Many authorities on the posture of children agree that the postural characteristics of children vary as the child progresses from one age to another. However, a characteristic, normal for one age, becomes a defect if it persists too long.

Because most children do not seem to develop physically and adopt good habits alone, educators have the opportunity to train and

guide children in body mechanics and make them intelligent concerning their greatest asset, the manipulation of the body in which they live.

Much can be done by the classroom teacher to interest the child in improved appearance from the maintenance of better positions by (1) teaching him stunts that will help him to experience the good position and teach him to attain it, (2) establishing of better habits of sitting, standing, and moving, (3) providing opportunity for practice in the above, (4) complimenting the child any time during the day when good body mechanics are shown.

The project at the Health Laboratory was carried out as described below. A physical examination was given each child upon his entrance to the group and a record made of his characteristics. A series of lessons was planned endeavoring to teach the desired attitudes and skills. The lessons were taught by the classroom teacher in the classroom.

Little equipment was necessary. Newspapers were placed on the floor for each child to lie down while participating in stunts, thereby removing the effect of gravity and making a good position more easily assumed. Two hanging bars were requisitioned to be placed in the doorways but due to labor difficulties, only one bar was put in by the carpenter. The bar is made of pipe cut the width of the doorway. Five supports were placed on each side of the door jamb. The bar was easily placed from one support to another depending upon the height of the children. When the bar was not in use it was placed on the top support so did not interfere with the use of the entrance. In an earlier study made elsewhere a gym bar was purchased.* It is a metal bar with a rubber ring on each end which is lengthened by screwing out, and is held there by no supports or screws but by pressure. It is easily placed and removed and can support a weight of 250 pounds. The price of the bar was \$3.75. The pipe mentioned above serves the same purpose and may be obtained at less expense. Bars on the play

*Petrie Sporting Goods Company, State Street, Madison, Wisconsin

grounds may be used but it is well to have indoor bars to give more activity each day.

The third piece of equipment was a foot board also made by the carpenter. It is a board 14 feet long with slanting sides on which the child walks to strengthen the musculature of the feet. The heel is in the gutter and the large toe is curled over the top gripping the top of the board. When the child becomes familiar with the foot placement the hands are placed in various positions to give the body an upright position while walking.

The fourth article useful in this study was a box of marbles used for carrying one marble curled under the large and adjoining toe of each foot, and walking on the outside of the foot with the soles of the feet facing each other. Counting steps to see how many may be taken before the marble was dropped, and many marble carrying relays provide fun. These marble games are strengthening to the arches of the foot.

Tables or desks in the classroom may be used very nicely for various stunts. An example of the former is lying face down lengthwise on the table, flinging the arms as if to fly. An example of the latter is rowing, sitting on the desks with the toes hooked under the support in the back of the seat while the rowing movement is taken. Following a leader for rhythm or singing row, row, row your boat, adds interests to the latter stunt.

Broom handles (separated from the broom) make very nice equipment to teach an upright position. Holding the bar with one hand touching the chest and touching the bar to the abdomen with the other hand, shows the child or college girl that the bar slants toward the feet in good erect positions and away from the feet if the chest is depressed and the abdomen sagging. The broomstick serves as a check for the child to study his own position. The bar is also helpful in teaching a good position of the upper back.

Another useful piece of equipment to stimulate the child's interest in his own appearance is the Dwight Posture Model* which may be placed in various positions showing the chil-

dren how some of them look when they are standing and sitting.

Stunts are arranged in each lesson to strengthen various parts of the body: upper back, abdominal walls, legs, and feet. Stunts are also included to give proper pelvic tilt and improved position of head, chest, and shoulders.

The study consists of the following steps:

(1) Interesting the child.

(2) Giving the child an understanding of proper positions so that he may recognize them.

(3) Teaching stunts to help him experience good positions and gain needed strength in muscles.

(4) Providing an opportunity for classroom practice in stunts.

(5) Stimulate children to do the following:

Chin on Bars.

Climb Trees.

Climb Ropes.

Play on Bars Daily. (5 or 6 stunts)

Have Bars and Ropes at Home.

Walk Tall.

Sit Tall.

Bend knees when stooping to use leg strength in place of the weaker back muscles.

Use good habits:

Stand on two feet.

Carry weights correctly.

(6) Compliment the child when any position or movement is good.

(7) Let the child know that the teacher considers it important.

(8) Tell the child, "You look so nice when you stand tall and sit tall."

The classroom teacher and the physical education teacher have an opportunity to help children improve their body mechanics: habits, attitudes, and skills. Improved body mechanics will be an aid to the children throughout life. Any individual, boy or girl, man or woman, is impressed or depressed by the appearance (body mechanics) of those about him. Children will grow crooked and bent if they stand and sit in crooked and bent positions.

*Phillip C. Aspinwall, 222 Beacon Street, Boston, Massachusetts.

Malaria Control—A Cooperative Venture

By D. F. ASHTON

Malaria Control and Investigation
North Carolina State Board of Health
Raleigh, North Carolina

THE health department is the agency which is chiefly responsible for the prevention and control of all communicable diseases in a given area. It is therefore also responsible for prevention and control of malaria. The health department, however, must have the support and backing of the people it serves. In the April issue of this bulletin some of the history of malaria was outlined. In this article an attempt will be made to sketch briefly some of the problems encountered with suggestions whereby everyone may help in malaria control.

Probably the most difficult problem confronting the health department is ignorance. Too often the advice of laymen who know nothing about the problem is taken in preference to that of a person well trained in that particular field.

There are several absolutely erroneous remedies which have been advanced by persons who know nothing about malaria or malaria control which may be of interest to the reader. These statements may also give the reader an idea of the problem facing health workers since they will bring to mind similar statements which the reader has heard.

This statement of error was made by a public official in a small town before a group which was considering a drainage and general mosquito control program: "All this talk about mosquitoes coming from these swampy areas is the bunk. I know that mosquitoes come from China berry trees and the hedges around the yards, and I say to cut down the China berry trees and we won't have the mosquitoes. And as for getting rid of malaria. I eat plenty of hog meat and peas and have never had malaria." The people listened to this man.

The town has done nothing as yet towards controlling its mosquito problem in spite of the fact that many of the people have tried since then to get the work done.

It is well known that all mosquitoes must have water in which to breed. This water may be in a swamp, ditch, pond or fish pool in the back yard, or in a tub, tin can, tree hole or the water held in the leaf of a pitcher plant.

It is true, to one who does not observe mosquitoes closely, that they seem to breed in China berry trees and shrubs. This is because most of the mosquitoes, by nature, fly at night and any plant which has an abundance of leaves forms an ideal place for the mosquito to hide during the day.

A second false belief is the way the malaria mosquito becomes infectious. A man was explaining to me just how the mosquito became infected, and I am not sure whether he believed my explanation or not. This is his explanation: "The mosquito when it hatches from the water sips up some of that green skim which you see on them ditches and then flies to someone and bites him. When the mosquito bites this person it injects some of this skim into the person and he gets malaria." This person had learned that stagnated ponds produced mosquitoes. He had also heard the common belief that when a scum is on the surface of water mosquitoes will be breeding plentifully, and one should guard against malaria. Not knowing just how the mosquito becomes infectious, the "sipping up of the skim" was a good idea. This person was right when he said that malaria mosquitoes come from stagnated (not polluted) ponds. He was incorrect however in his belief that the scum

on a pond indicated a lot of malaria mosquitoes were coming from it. The malaria mosquito prefers a clean body of water which is relatively quiet, the surface of which is pierced by aquatic vegetation and overlain by scattered floatage, such as twigs, leaves, etc. When a pond becomes covered with a mat of green scum it is no longer an ideal breeding place. This pond, however, may have hatched off an immense number of malaria mosquitoes before the scum formed. The mosquito, to become infected with malaria, does not "sip up the green scum," but just bites a person who has malaria. These malaria parasites taken from an infected person develop in the mosquito's body and when the mosquito bites a second person the parasites are injected into him.

Another "old wives tale" tells of a method for curing malaria. This is a medicine supposedly developed by an old Indian and was handed down for several generations. The roots of the wild cherry and sassafras, and the bark of the sweet gum were mixed together in equal parts and put into a quart jar. The jar was then filled with whiskey, closed up and left for a week. After this ageing, a tablespoonful was taken three times a day or when a chill was felt coming on. I believe this man wanted an excuse to drink his whiskey, but why put all the roots and bark in it. As for having any effect on the malaria parasite, it has none.

It is just such beliefs which the health worker must first destroy before any progress in public health can be made. It is encouraging, however, to find that the public in general is looking to the Health Departments, both state and county, for assistance in problems of public health.

Anyone who has had an attack of malaria should see his doctor at once since immediate treatment often means immediate cure.

The need for state-wide regulations governing ponds and pond construction became obvious a few years ago. The North Carolina State Board of Health passed two such regulations which will be given in brief. The first of these was adopted in May 1937 and deals with the construction of new ponds and is

entitled "Regulations Governing the Impounding and Maintenance of Impounded Waters in North Carolina." This regulation requires that any person proposing to impound water, raise the level of existing impounded water, or reimpond water in areas where previous impoundage has been discontinued for one or more seasons, shall, prior to the institution of any construction activities, make written application to the State Board of Health and receive therefrom a written permit for impoundage construction. An application for a permit shall be made on the approved form furnished by the State Board of Health and in the name of the person making application. This permit shall be issued by the State Board of Health when compliance with the following rules and regulations has been assured:

1. The area to be covered by water shall be completely cleared of all brush, trees, undergrowth, logs, stumps, and other objects, which, if not removed, would float or collect floatage on the surface of the water. Provided, that the above does not include grass, vegetation, brush, trees, stumps, etc., which will be permanently and completely submerged at times of low water and which are, therefore, not of sanitary importance. Stumps and other vegetation left in the basin shall be cut off so that they will be at least one foot below the minimum water level.

2. The shoreline shall be kept clean of all grass and floatage at all times.

3. In designing and constructing the impoundage project, flashboards or other means shall be provided for controlled fluctuation of the water level at any season of the year, and means for draining the entire pond shall be installed.

The State Board of Health from time to time shall make inspections of the impounded water as are deemed advisable.

The second regulation was adopted in May 1941. This regulation deals primarily with ponds which were in existence prior to May 1937. This regulation is stated as follows: Where any owner or lessee of lands shall cause or permit, by excavation, obstruction of a stream, or otherwise, the accumulation or col-

lection of a body of water upon said lands which would not have formed under natural conditions or shall permit the continuance of any such body of water already in existence, and where it is discovered that *Anopheles quadrimaculatus* mosquitoes are breeding in such impounded water, or where it is further discovered by blood slide tests made by state, county or municipal health authorities that one or more persons residing within one mile of such impounded water have malaria, such owner or lessee shall, within 30 days after the receipt of written notice by any state, county or municipal health authority, that such conditions exist, take effective measures prescribed by or satisfactory to the North Carolina State Board of Health for the prevention of the breeding of the *Anopheles quadrimaculatus* mosquitoes in the impounded water by draining or filling.

It has been found that in North Carolina most of our malaria is "man made," that is, malaria is more prevalent in areas around ponds or where there are numerous poorly constructed drainage ditches. For this reason it was felt that since malaria is a preventable disease that it is necessary for health authorities to control the construction used for impounding water. Each farmer and the citizens of every town should see that the ditches on his property or in his town are not a menace to the health of the community.

A well-constructed pond is an asset to a community, but one which is not properly constructed can mean nothing but misery and expense to everyone living within a mile of its shore. If everyone constructing a pond will cooperate by building his pond according to the North Carolina State Board of Health standards and if everyone will be on the lookout for persons who are contemplating the construction of ponds who are not familiar

with these regulations will inform them of the regulations, we can make North Carolina just a little better place in which to live.

Malaria control cannot be accomplished by a small group of people but must have the understanding and cooperation of everyone.

The State Board of Health in conjunction with the U. S. Public Health Service is doing malaria control work around all military camps in the state where malaria or the malaria mosquito is found. This work is also being done in certain towns and cities which are liberty points for the enlisted men. This work is important for two reasons. The first is that we wish to protect our soldiers from malaria which they may get from the local population. The second is that we wish to prevent the infestation of our civil population with strains of malaria which our soldiers returning from over seas or from other parts of the United States may introduce. This is a tremendous undertaking because of the numerous military establishments in North Carolina and their wide distribution.

So far, very little malaria has been found which was contracted in this state in either the military or civil populations, and we trust that this record will be maintained.

The malaria which is endemic in this state is difficult to control, but we do not know just what would happen should new strains be introduced.

It is for the benefit of the individual as well as the entire population that your health department urges everyone who contracts malaria, especially those who have been in contact with troops or migratory labor from malarious areas, to see his doctor at the first sign of the disease.

Everyone can help in the control of malaria and it is the duty of everyone to do what he can to prevent the spread of malaria in our state.

News Release

Washington, D. C.

For the seventeenth consecutive year, National Hearing Week will be observed through-

out the United States and Canada, sponsored by the American Society for the Hard of Hearing, Washington, D. C. and its 121 chap-

ters. The dates are October 24-30 and the theme is The Magic of Hearing. The purpose of the week is to emphasize the value of hearing and the means of conserving it; the great prevalence of lowered hearing and the means of offsetting ensuing difficulties of communication—lip reading and accepted mechanical devices.

The public will be reached through open meetings conducted by chapters; through radio programs, newspapers and magazine articles, window displays, special stickers and posters, and outdoor signs.

This year, as never before, National Hearing Week has an added significance, for already soldiers and sailors are returning from battle fronts with war damaged ears. To prepare them to take again their rightful places on the home front, the A.S.H.H. and its chapters are cooperating with the Army, the Veterans Administration and the U. S. Rehabilitation Service. These agencies have already arranged for the teaching of lip reading and the use of mechanical aids when possible. A.S.H.H. chapters are offering practice classes in lip reading, planned recreation, information services, and, most important of all, practical psychology through contact with members who have already surmounted their own physical handicaps and have found their places in social and economic life.

Once more President Roosevelt has endorsed National Hearing Week and the Society which promotes it. In a letter to Warren H. Gardner, Ph. D., President of the A.S.H.H., Franklin D. Roosevelt says:

"My dear Dr. Gardner:

Once again it is my pleasure to send sincere greetings to the members of the American Society for the Hard of Hearing.

The week of October 24-30, which has been set aside as National Hearing Week for this year, holds greater significance than any in the past, for in addition to the unfortunate among our civil population, we will have added hundreds of war casualties to that group. I want you to know that constructive steps are being taken by the



Diona Frances Anderson

One year old September 10th, daughter of Mr. and Mrs. Archie P. Anderson, Oakwoods, North Carolina. She is a breast fed baby. Her weight at one year—22½ pounds, height 30 inches. A first class demonstration of good care.

Army, the Navy, and the Veterans' Administration in the rehabilitation of the hard of hearing following this war.

To your Society goes a great deal of credit for the fine work that is being done throughout our land in aiding these handicapped individuals to secure employment. It is very gratifying to me to know of the many hundreds that are at work in our war industries.

May I express the hope that your planning will be along progressive lines and I can assure you that the governmental organizations responsible for rehabilitation of the deaf will cooperate with you."

Notes & Comment

By THE ACTING EDITOR

OUR FRONT COVER

THERE are many views pleasing to the eye at the State Laboratory of Hygiene Farm. Our photographer selected this one along with several others. From the viewpoint of the public health worker the horses used in the production of Diphtheria Antitoxin are beautiful. The laboratory worker would probably consider the sheep which supply blood for media, laboratory tests, etc., to be more beautiful. Other laboratory workers would consider the colonies of rabbits, guinea pigs and mice as things of beauty. All of these animals are kept at the State Laboratory of Hygiene Farm and make definite and valuable contributions to the protection of the health of the people of North Carolina.

NEW BOARD MEMBERS

The public press of September 10th carried the news that Governor Broughton had appointed Mr. Larry I. Moore, Jr., of Wilson, to succeed Dr. H. G. Baity, of Chapel Hill, whose term expired June 30th, and who is now employed in governmental work in South America; and that Dr. J. O. Nolan, of Kannapolis, was chosen to fill the vacancy left by the retirement of Mr. C. C. Fordham, who is now an officer in the Navy.

The Governor reappointed Dr. H. Lee Large of Rocky Mount for a term expiring May 1, 1947. Dr. Large has been a member of the Board since 1931.

Mr. Moore is an Attorney at Law of recognized ability. He is the only member of the legal profession to be a member of the State Board of Health in recent years. He has represented Wilson County in the General Assembly and has a good record as a legislator.

Dr. Nolan graduated from Jefferson Medical College of Philadelphia in 1921 and was licensed to practice medicine in North Carolina the same year. He is a successful practitioner and comes from an industrial section which has not had recent representation on the Board.

New members frequently bring new viewpoints that are distinctly helpful in promoting a vigorous public health program.

• • •

***DR. McCORMACK** The death of Dr. Arthur Thomas

McCormack ended what was probably the longest dynasty in public health history; for he and his father, Dr. J. N. McCormack, were the State Health Commissioners of Kentucky continuously for sixty-four years. The father had been active in reorganizing the American Medical Association, and served on the Organization Committee with Dr. George H. Simmons, of Chicago, and Dr. P. Maxwell Forshee, of Cleveland, at the St. Paul meeting in 1901, thus playing an important part in rejuvenating and reshaping the greatest of all medical organizations.

Dr. Arthur T. McCormack was born in the hills of Nelson County, Kentucky, August 21, 1872, the son of a country doctor who was destined to play an important part in public health and medical organizations. After having finished the public schools, Arthur McCormack took an A.B. degree at Ogden College in Bowling Green. Then there was further academic work at the University of Virginia. Next he was graduated from the College of Physicians and Surgeons of Columbia University with an M.D. in 1896. His internship was served in Patterson, N. J. After that he entered general practice with his father in Bowling Green in the horse and buggy era. Later he established St. Joseph's Hospital, the only hospital in those days between Louisville and Nashville.

He served as Health Officer of Warren County from 1897 till 1900, and as Assistant State Health Commissioner and Member of the State Board of Health. On the death of the elder McCormack in 1912, Dr. Arthur was elevated to the position of State Health Com-

*Editorial in the Southern Medical Journal, Sept., 1943.



A group of buildings—State Laboratory of Hygiene Farm. The building on the right is the Farm Laboratory; two horse barns can readily be identified; the sheep barn is between the two horse barns.

missioner. He was one of the founders of the American College of Surgeons and a life member. He organized Base Hospital No. 59 in World War I but was sent to Panama for the duration of the war as Health Officer by Surgeon-General William C. Gorgas.

For many years and up until the time of his death Dr. McCormack was Secretary of the Kentucky State Medical Association and Editor of its mouthpiece, the *Kentucky Medical Journal*. He was a delegate for many years to the American Medical Association, and was a member of most of the important public health and medical associations, many of which he served as president. In fact his whole life was spent in working with, and for organized medicine.

Dr. McCormack was an indefatigable worker, but was the soul of friendliness and an extrovert to a delightful extent. He loved his fellow man and he liked the society of his friends. As a raconteur he had few equals and

as a speaker he was in constant demand. Except when dealing with extensive statistics he was never known to refer to a note. He used to say that when he arose to speak he had not the slightest idea what he was going to say.

Arthur McCormack had a good head on his shoulders; and it carried him far and won him success. But a much greater asset was his marvelous personality and his unusual faculty of making friends and holding those friendships. Throughout the years in Kentucky, whether the state was under a Republican or Democratic rule, Arthur McCormack never failed to secure the cooperation of the administration, and thus kept the State Health Department functioning smoothly and efficiently.

As might be expected, Dr. McCormack was the recipient of a number of honorary degrees, such as A.M., Sc.D., D.P.H., and LL.D.

Tall of stature, large of frame, with a huge head, a heavy shock of hair, a handsome face with a winning smile, and a hearty handshake,

Dr. McCormack made friends and created admirers wherever he went. He was a great health officer, second to none in efficiency and in national influence. His untimely passing is a severe blow to American public health and to the thousands upon thousands who looked upon him as their personal friend.

* * *

EVIDENCES OF PROGRESS This is the subject of a two page editorial in a recent number of the monthly BULLETIN of the Indiana State Board of Health. The editor, Dr. Thurman B. Rice, a veteran public health worker and now acting secretary of the Indiana State Board of Health, is a competent user of the English language and is evidently a very able student of English literature. In this editorial he outlines the objectives of each of the major wars in which our Country has been engaged as these objectives are reflected in the poetry of the time. If we had space we would like to quote his entire editorial. The poem which he signifies as best representing the purpose of our present conflict is introduced by Dr. Rice as follows:

"Then, in the position of honor in this little editorial we wish to put a poem which was found on the body of an Australian soldier. The person who found this poem probably could have given us the name of the man who had written it, but he had such a keen understanding of the meaning of the poem that he decided it would be better simply to let it be anonymous and for us all to feel that this is the song of the Unknown Soldier of the Second World War rather than the song of one young man from Australia. It is in a sense the song of every young man who gives his life for his country in this World War. This poem also has been reported in these columns as having been recited by the late Lord Lothian shortly before his death and while he was Ambassador to the United States. Read this poem very carefully and note in it the spirit of hope and faith and trust. Note in it the careful and honest expression of better times ahead, that these young men are not dying in vain, that they are fighting for a real cause and that it has been a great ex-

perience for them to be present at the time when the greatest date in history was just coming over the horizon.

WITH FEARLESS EYES

"You that have faith to look with fearless eyes
Beyond the tragedy of a world at strife
And trust that out of night and death shall rise
The dawn of ampler life;

Rejoice, whatever anguish rend your heart,

That God has given you, for a priceless
dower,

To live in these great times and have your part

In freedom's crowning hour:

That you may tell your sons who see the light

High in the heaven, their heritage to take:

I saw the powers of darkness put to flight!

I saw the morning break!"

—As quoted in a speech by the late Marquess of Lothian, British Ambassador to the United States.

* * *

A FEDERATION OF WAR PHILANTHROPIES

Support for the far-flung USO—the home away from home for our own fighting men; comforts for the "barbed-wire legion" of prisoners of war; food for starving Greece; medical supplies for gallant Russia; aid for the scorched earth of stricken China; assistance for hundreds of thousands of homeless refugees.

These, and countless similar calls, are the concern of generous America, and the immediate task of the National War Fund, and its affiliated war funds in your own state and your own community.

Born of war, and linked to the peace by effective association with local home agencies for health, welfare and recreation, the National War Fund is a philanthropic federation with three simple aims; first, to determine the nature and the extent of the war-related needs; second, to see that everybody has a chance to contribute to the funds required; and third to channel the sums raised for its member agencies wherever American help is currently most needed—enough and on time.

Those three aims lead to one objective—to

help win the war sooner, with a minimum loss of life.

Americans will respond as they always have to the appeal of simple humanity. But all of us will be moved even more strongly by the realization that the war will surely be won more quickly, and fewer lives will be lost, as long as our fighters and all our Allies and their families are sustained with the greatest weapon of them all—the will to win.

The National War Fund is represented in North Carolina by the United War Fund of North Carolina.

Our goal for the State is \$1,880,681 which is the largest fund-raising endeavor of its kind in the history of the State. Our Honorary Chairman is Governor Broughton and our Chairman is Robert M. Hanes of Winston-Salem.

Most of the campaigns in the State are being held in the latter part of October.

* * *

A RED FACE A prominent New York

doctor relates that back in his interne days he was sent out on an obstetrical case to an address where he found a dilapidated tenement house which had been gutted by fire and looked uninhabited and uninhabitable. He telephoned the hospital, said it must be the wrong address, but was told no, it was all right and to look around and he'd find the patient. So he made his perilous way to the top floor back, where he discovered the patient and a twelve-year old girl who had to be sent out to stay on the fire escape during the ensuing proceedings. In due course of time, despite the nightmarish surroundings, the doctor was able to report that mother and baby were both doing well. Filled with indignation and youthful idealism, he went home, sat down, and wrote an outraged letter to the Commissioner of Health, describing the incident and saying that the building wasn't fit for pigs to live in. Nothing came of this for some time, but finally he received a letter from the Commissioner's office. His communication had been received, it said, and his complaint that pigs were being kept at such-and-such an address would be duly investigated.—NTA Clip Sheet.

PHYSICAL EDUCATION

Mr. Spencer has called attention to one value in physical education which has unfortunately escaped the attention of many of us. No one would belittle the advantage of well developed muscles and their proper coordination. The physical education that teaches children fair play and sportsmanship is even more important. A proper consideration of others, their rights and privileges, is necessary for happy and healthful living.

* * *

POSTURE

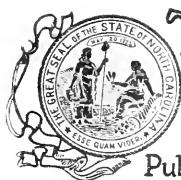
Miss Potter and Miss Kearns have in their article in this issue of the BULLETIN called attention to the fact that expensive equipment is not necessary for the correction of postural defects. Altogether too many of us, both in and out of the teaching profession, think that unless we have specially designed and factory constructed equipment we cannot produce satisfactory results and therefore neglect to try substitutes. These times call for creative imagination as well as for ingenuity in devising substitutions for things which we would like to have but cannot get.

* * *

MALARIA

Mr. Ashton has been trained to fight malaria. For several years he has devoted his entire time to the breaking up of the vicious cycle which permits the Anopheles mosquito to carry the malaria parasite from one person to another. His efforts have been notably successful. His article in this issue of the BULLETIN calls attention to some of his most difficult obstacles; notably, erroneous ideas, superstitions, and indifference. Individuals as well as groups of individuals can do much to protect our people against malaria. The wide distribution of malaria makes it the most important disease in the world today. Our armed forces operate over wide areas where malaria is prevalent. Many of them will return harboring malaria parasites. We must be alert in our fight against the Anopheles mosquito. During the winter months ahead farmers can drain many potential breeding places. The State Board of Health will gladly give advice concerning the proper drainage methods.

DURHAM, N. C.



The Health Bulletin

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A black and white illustration for a Christmas Seal advertisement. It depicts a woman in profile looking up at a night sky where a reindeer is pulling a sleigh with two figures. A large cross is visible in the lower left. The text "BUY CHRISTMAS SEALS" is at the top and "PROTECT YOUR HOME FROM TUBERCULOSIS" is at the bottom.

BUY CHRISTMAS SEALS

**PROTECT YOUR HOME FROM
TUBERCULOSIS**

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 *On leave.

FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested:

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
Diphtheria	Measles	Veneral Diseases
Don't Spit Placards	Padiculosis	Vitamins
Endemic Typhus	Pellagra	Typhoid Placards
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Time Cards: Under 5 months;
Prenatal Letters (series of nine monthly letters).	5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.
The Expectant Mother.	Diet List: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.
Breast Feeding.	Instruction for North Carolina Midwives.
Infant Care. The Prevention of Infantile Diarrhea.	
Table of Heights and Weights.	

CONTENTS

	Page
Main Facts About Christmas Seals	3
The Tuberculosis Association Program	4
Tuberculosis In Wartime	6
Deaths from Tuberculosis of the Respiratory System by County and Race: 1942.....	7
Suggestions for Fall Program for County and City Nutrition Committee 1943	8
Reorganization of State Board Effective September 1	13
Map	15
Diagram	16

Main Facts About Christmas Seals

By FRANK W. WEBSTER, Executive Secretary
North Carolina Tuberculosis Association
Raleigh, North Carolina

TODAY Christmas Seals do not give relief to those suffering with tuberculosis, nor do they provide hospital care for those who are ill. They do not provide these services because by their earliest activities they secured other methods of meeting these needs.

This country now boasts tuberculosis institutions and equipment, the replacement value of which amounts to more than \$300,000,000. The annual cost of tuberculosis hospitalization today is approximately \$76,000,000. Yet the greatest income from the sale of Christmas seals ever achieved in one year was only \$9,000,000. The anti-tuberculosis associations, because of foresight, aided in securing hospitalization for an illness too overwhelming in its attack to be met by private charity.

In place of treatment, the Christmas Seals finance a program of prevention. This is a form of insurance in which each can participate for his own protection, while also satisfying his social conscience because the measure of protection is community-wide.

The tuberculosis association is the public's guarantee of an adequate program of community protection. Here is an organization that does not stick to one pattern of activity, no matter how out-moded it becomes; it changes its program to meet changing needs.

The fundamental aim of Christmas Seals is to finance a program that will fill the gaps in the program of health and welfare departments; that will see new problems, develop new methods to meet them, and demonstrate

the value of these methods, so that the taxpayers will support these services willingly as a sound part of a broad community economy. Clinics, sanatoria and public health nursing services were initiated mainly by the private organizations. Today they have been largely assumed by government, and we could not do without them.

The 1942 Christmas Seal Sale Campaign in North Carolina produced \$123,411.71. Seventy-five per cent of this money or \$92,558.60 was retained in local communities for tuberculosis work; twenty per cent or \$24,682.52 was sent to the State Office for its work in the promotion of projects of prevention and control of tuberculosis throughout the State; and five per cent or \$6,170.56 was sent to the National Tuberculosis Association for its services to the State and for further research work in tuberculosis.

Below are the expenditures of the North Carolina Tuberculosis Association for the fiscal year, April 1, 1942-March 31, 1943. These figures were copied from the audit of March 31, 1943.

Health Education: Early Diagnosis Campaign; annual and district conferences; general literature and posters; bulletins; motion picture films; News Letter; essay contests; scholarships; stenographic and clerical service; travel; salaries \$5,160.53

Administration: General supervision of program; rent; equipment; supplies; telephone and telegraph; postage; annual and other

reports; insurance; stenographic and clerical service; travel; salaries \$2,335.04

Seal Sale: Field service; arranging and holding regional conferences; preparing and distributing publicity and educational materials; handling supplies; free seal sale supplies to locals; shipping; radio; stenographic and clerical service; travel; salaries \$7,744.60

Field and Organization: Visits to local committees and organizations to advise and assist on programs and organization problems; Christmas Seal Sale; organize and reorganize local associations; provide speakers; stenographic and clerical service; travel; salaries \$2,424.61

A History of the Tuberculosis Seal*

In 1907, Mr. Jacob A. Riis received a letter from Copenhagen bearing a peculiar seal in addition to its regular postage stamp. When he wrote to inquire about it and learned that a Danish postal clerk, Einar Holboell, had hit upon the device of selling such stamps or seals to raise money for combating tuberculosis, he was so interested that he wrote an article in the Outlook describing the idea. Miss Emily

P. Bissell of Wilmington, Delaware, read the article and, using a seal designed by Howard Pyle, she raised \$3000 for a tuberculosis shack of eight beds in which she was interested. Encouraged by this success, she persuaded the American Red Cross to apply the idea on a nation-wide scale with the result that about \$135,000 was raised by this organization in 1908 and over \$200,000 in 1909. In 1910 Dr. Farrand suggested that the National Tuberculosis Association should cooperate in the seal sale, which was conducted as a joint Red Cross Seal Sale until 1919, when nearly \$4,000,000 was obtained. Since that date the Christmas seals have been sold by the National Association alone under the emblem of its double-barred cross and have continued to prove the most consistently fruitful method of fund-raising ever devised for any social purpose. Mr. Riis' article in the Outlook formed one link in the chain which made this result possible.

*From the Life of Hermann M. Biggs, by C.-E. A. Winslow, Dr. P. H.

The Tuberculosis Association Program

By FRANK W. WEBSTER, Executive Secretary
North Carolina Tuberculosis Association
Raleigh, North Carolina

THE North Carolina Tuberculosis Association continues to stress the compelling power of health education in the control of tuberculosis. From the very beginning, tuberculosis associations have fought the disease with education. The death rate has been drastically cut, 75 per cent since 1904, the year the National Association was organized.

Tuberculosis is far from being under control in this country. In spite of the 75 per cent drop in the death rate, tuberculosis killed 60,000 persons in this country last year, and even though forced from the first to the seventh

cause of death, it is still the greatest disease killer of persons between 14 and 45. To these tragic figures is added the fact that this country is now threatened by a war time rise in tuberculosis.

The State Association aims to arouse public sentiment for the control of tuberculosis through public health education in every county in the state. There are now twenty-three county and two city organizations. This leaves seventy-seven counties unorganized and carrying on within the county two or more different kinds of activities. The ultimate goal

of the State Association is to have one hundred county tuberculosis associations, one in each county in the state, carrying out a concentrated and coordinated program in tuberculosis control.

There is no perfect program for a tuberculosis association. To be sure, there are good programs and there are bad ones; but one that is good in one county may be bad in another. The program that may be good in this county today may well be totally inadequate tomorrow. The only kind of program that can be considered perfect is the one that is adapted from day to day to meet the needs of a changing community. It must be adapted on the basis of certain fundamental principles necessary for tuberculosis control.

There are four bases on which the sound tuberculosis program is built. These are education, discovery of the tuberculosis case, treatment and rehabilitation.

Education is the background upon which all of the other activities of the program must of necessity be planned. Education in itself is two-fold. First is the education of the individual, to see that he knows enough of present-day medical knowledge about tuberculosis to safeguard his own health; second is education of the citizen so that as a member of the community he may do his part to see that the community provides those measures of protection for the entire population.

The second basis for the sound program of tuberculosis control is discovery of the case. Here is a disease that is insidious in its onset and can exist for a long time without being apparent to the patient, to his family or even to casual medical observation.

The ideal method of discovering all cases of tuberculosis would possibly be to have each individual in a community visit a trained and competent physician periodically for a thorough examination, including X-ray of the chest. Obviously, in most communities this idea has not been approached. As a result, it has been necessary to develop effective methods of examining large numbers of people. The degree to which these programs of mass examinations by tuberculin testing or X-ray

are carried on depends upon the prevalence of tuberculosis in a community and the availability of facilities for examination. One great value of such a program of mass examination is the manner in which it serves as education to the individual and to the community of the need of such examinations.

The third basis of the program for tuberculosis control is treatment. Treatment is essential for the recovery of the individual and in most cases treatment in the sanatorium is necessary to prevent the patient from spreading his infection to members of his family and to his friends. Treatment of tuberculosis is such a lengthy process and so expensive that it becomes a community responsibility to provide this care on a basis of public health protection.

The fourth basis of the program is rehabilitation. Medical treatment alone may heal sick lungs when the patient follows medical advice completely. But thousands of patients become impatient with the long, slow process of treatment. Modern occupational therapy aids the patient to adjust to treatment and helps to condition him for his return to work. It is followed by aptitude study, vocational guidance, job training and placement, all designed to make more ex-patients self-supporting. The process of treatment cannot be considered ended until the patient has made satisfactory recovery and has been aided in his readjustment to his normal life to the extent that he is able to again occupy a position of normal self and family support. Rehabilitation makes taxpayers out of tax-consumers.

From these four fundamental bases it is possible to develop the perfect program for any county. This perfect program can be built only by careful study and appraisal of the existing situation. The job of the tuberculosis association is to see that the community has the most effective service possible. Treatment itself becomes too large a problem to be handled effectively by private contributions.

Much of the necessary work of finding the tuberculosis case is so fundamental to a sound program of public health that it, too, should be carried on by the official agencies. The job

of the tuberculosis association is to cooperate with the official agencies and with organized citizen groups in the county to see that these things are done. It may be necessary for the association, for a short period, to actually demonstrate some of these procedures.

CORRECTION: The article in the October, 1943 BULLETIN entitled: Physical Education in the School-Health Coordinating Program by Charles E. Spencer should have been credited also to: Ruth O. Moore, Assistant Adviser Physical Education School-Health Coordinating Service as a joint author.

Tuberculosis In Wartime

By IAGO GALDSTON, M. D.

Executive Secretary, Medical Information Bureau
New York Academy of Medicine

IN time of war—beware of tuberculosis. Beware of tuberculosis at all times, but particularly so in wartimes. For war and tuberculosis go together. And if we are to profit by past experiences, then we must redouble our guard.

In the last World War tuberculosis gained headway among all the peoples involved. The death rate, which up to 1914 had been steadily declining, began to rise shortly after hostilities broke out and continued to do so as the war years added up.

In this war it is not unlikely that tuberculosis will again make headway. Up to the present the tuberculosis record in the United States is in the main reassuring. But in England the early war years showed an increase of 10 per cent in deaths from tuberculosis. The figures for most of the other warring nations are either unavailable or unreliable.

But even in our own country, despite a continued decline in the general death rate from tuberculosis, there are some disturbing figures for the younger age groups. During the past year (1942) there was a noteworthy rise in tuberculosis deaths among young white men 15 to 24 years of age, and among young girls 10 to 14 years of age. These figures are a challenge which we must meet promptly and effectively.

One of the most important weapons in the war against tuberculosis is the X-ray. Every young person going to work for the first time should have his or her lungs X-rayed. Such an X-ray is of greatest value when it is part of a complete medical examination. Of equal

importance are the day-in, day-out living habits, principally good and adequate food and sufficient rest.

Eating isn't a matter of appeasing hunger. What we need are the right kinds of food, in sufficient quantities to supply us with energy and to keep us healthy. There is nothing "faddish" or "sissy" in knowing what foods we need and in eating them.

Adequate rest is of equal importance. Recreation and entertainment are also good, but not when purchased at the cost of sleep.

Then to be on "double guard," every one should know the signs and symptoms of tuberculosis: loss of weight, a "cold" that hangs on, a tiredness you can't get rid of, fever, spitting blood. The presence of any of these does not necessarily mean that the individual has tuberculosis, but each of these symptoms should be investigated.

In these days of intensive war effort, every man, woman and child counts. We need all the health and vitality we can muster. We cannot afford to gamble with or to waste any of our manpower. It is our individual responsibility to see that none of it is wasted. Learn how to best care for your own health and that of your family and how to protect yourself against the menace of tuberculosis.

Your local tuberculosis association is ready and eager to help you. You will find there literature, posters, information and advice. It is yours for the asking. Your support of the annual Christmas Seal Sale has made these services possible. Make them your weapons for health and victory.

Deaths From Tuberculosis of the Respiratory System By County and Race: 1942

Total Deaths (Tuberculosis, All Forms), 1,575

COUNTY	BY PLACE OF DEATH			BY PLACE OF RESIDENCE			COUNTY	BY PLACE OF DEATH			BY PLACE OF RESIDENCE		
	Total	White	Colored	Total	White	Colored		Total	White	Colored	Total	White	Colored
Total, State	1,452	589	858	1,262	461	796	Johnston	16	5	11	25	10	15
Alamance	12	8	4	20	12	8	Jones	5	---	5	---	---	4
Alexander	5	3	2	5	3	2	Lee	7	1	6	11	4	7
Alleghany	2	1	1	2	1	1	Lenoir	36	7	29	35	3	32
Anson	7	---	7	8	---	8	Lincoln	1	---	1	---	---	---
Ashe	2	2	---	2	2	---	McDowell	6	5	1	7	6	1
Avery	7	6	1	7	6	1	Macon	1	1	---	2	2	---
Beaufort	24	4	20	28	5	23	Madison	2	2	---	3	3	---
Bertie	9	2	7	9	2	7	Martin	10	2	8	12	3	9
Bladen	8	3	5	11	4	7	Mecklenburg	53	19	34	54	19	35
Brunswick	4	1	3	5	1	4	Mitchell	1	1	---	1	1	---
Buncombe	279	195	84	56	33	23	Montgomery	2	---	2	2	---	2
Burke	17	14	3	8	4	4	Moore	4	3	1	7	4	3
Cabarrus	5	1	4	8	4	4	Nash	17	5	12	22	6	16
Caldwell	5	4	1	6	5	1	New Hanover	24	4	20	23	4	19
Camden	1	---	1	1	---	1	Northampton	3	---	3	7	---	7
Carteret	7	3	4	7	3	4	Onslow	2	1	1	5	3	2
Caswell	4	---	4	6	---	6	Orange	6	4	2	9	7	2
Catawba	2	1	1	4	2	2	Pamlico	2	2	---	4	3	1
Chatham	2	---	2	4	1	3	Pasquotank	10	4	6	14	4	10
Cherokee	3	3	---	5	5	---	Pender	3	---	3	7	---	7
Chowan	6	4	2	7	4	3	Perquimans	3	---	3	3	---	3
Clay	1	1	---	1	1	---	Persimmon	7	2	5	7	2	5
Cleveland	10	4	6	13	6	7	Pitt	24	3	21	44	9	35
Columbus	*9	2	6	9	2	6	Polk	---	---	---	---	---	---
Craven	20	2	18	26	3	23	Randolph	6	2	4	6	2	4
Cumberland	35	13	22	32	11	21	Richmond	8	3	5	10	4	6
Currituck	1	1	---	4	2	2	Robeson	*15	2	11	17	3	12
Dare	---	---	---	---	---	---	Rockingham	11	2	9	15	3	12
Davidson	6	1	5	10	4	6	Rowan	15	9	6	18	12	6
Davie	1	1	---	2	2	---	Rutherford	7	6	1	9	7	2
Duplin	13	3	10	20	4	16	Sampson	11	2	9	12	4	8
Durham	60	18	42	63	17	46	Scotland	3	---	3	5	2	3
Edgecombe	30	3	27	35	4	31	Stanly	7	7	---	10	9	1
Forsyth	63	17	46	71	22	49	Stokes	2	2	---	3	3	---
Franklin	5	4	1	8	6	2	Surry	7	6	1	10	7	3
Gaston	11	8	3	14	10	4	Swain	*3	2	---	3	2	---
Gates	3	---	3	3	---	3	Tennessee	---	---	---	---	---	---
Graham	1	1	---	1	1	---	Tyrrell	1	---	1	1	---	1
Granville	11	4	7	13	4	9	Union	6	5	1	7	4	3
Greene	7	4	3	12	6	6	Vance	7	3	4	9	5	4
Guilford	41	12	29	42	14	28	Wake	59	27	32	45	11	34
Halifax	23	6	17	33	9	24	Warren	4	1	3	4	1	3
Harnett	11	6	5	13	7	6	Washington	1	---	1	2	1	1
Haywood	7	7	---	9	9	---	Watauga	1	1	---	1	1	---
Henderson	8	6	2	11	8	3	Wayne	59	1	58	24	3	21
Hertford	13	2	11	15	2	13	Wilkes	5	4	1	7	7	---
Hoke	112	33	79	5	3	2	Wilson	33	7	26	33	6	27
Hyde	4	2	2	4	2	2	Yadkin	1	1	---	2	2	---
Iredell	13	5	8	14	5	9	Yancey	4	4	---	7	7	---
Jackson	*1	---	---	2	1	---							

*Indian Deaths (place of death)

Columbus 1
Jackson 1
Robeson 2
Swain 1

*Indian Deaths (place of residence)

Columbus 1
Jackson 1
Robeson 2
Swain 1

Suggestions For Fall Program For County and City Nutrition Committee 1943

By JOHN F. KENDRICK, M. D.

State Nutrition Committee, State Board of Health
Raleigh, North Carolina

DURING the spring and summer months of 1943, the nutrition committees of the state and counties of North Carolina have been on the march. Having for their principal objective, during the growing season, the production and conservation of the greatest stores ever available in North Carolina, these committees have served as the focusing point of all agencies, groups, and individuals interested in the accomplishment of that purpose.

Victory gardens and increased acreage of food crops have made more food available, and intensification of efforts to prevent wastage through proper methods of preservation have doubtlessly enabled the people of this state to face the approaching winter with the largest stock of home processed food on record.

For the success achieved toward the fulfillment of this objective the state and county nutrition committees and all of those with whom they cooperated are to be congratulated. But good nutrition entails far more than the mere storing-up of food. People must be taught to select, properly prepare, and eat the right foods; they must understand the reason for rationing and price control, and the effect of these upon our war effort; they must be taught to avoid the wastage of any food whatever; they must be taught the uses of food alternates; and they must be influenced to cooperate, share and play square, in the national effort to provide adequate food for civilians, the armed forces, and for our allies.

To assist county and city nutrition committees in their efforts to accomplish these objectives, the state nutrition committee respectfully submits these "SUGGESTIONS".

Fortunately, a nation-wide campaign to cover all aspects of the food program of the

government is about to be launched by the War Food Administration with the cooperation of other government agencies concerned with the problem. This "Food Fights for Freedom" campaign is to begin almost immediately, and all county and city nutrition committees are requested to participate to the fullest extent in making the over-all program a success.

When it comes to food there are gigantic tasks that depend for successful execution on one individual. That individual is the American citizen, who, multiplied by 130 million, can become a mighty force in making "food fight for freedom". To do his part he can:

1. Produce more food of the right kinds.
2. Conserve food, avoid waste.
3. Preserve fresh and perishable foods.
4. Turn food into effective working power by eating the right foods every day for health.
5. Adjust his diet to the food available by substituting plentiful for scarce foods.
6. Play fair in buying food—share it cheerfully and fairly through rationing.
7. Help keep food costs down—by paying no more than top legal prices.
8. Participate in community food projects, and inspire friends and neighbors to do the same.
9. Place the war first and expect to adjust to wartime and post-war conditions.

For food—American food—can be the deadliest weapon of all. It may save thousands of American lives. The course and length of the war may depend on how successfully we produce it—how willingly and widely we share it—how carefully we save it—how wisely we use it.*

*Food Fights for Freedom—pages 2-3.

The city or county nutrition committee should delegate responsibility for food demonstrations to an individual or committee. It may be helpful for the county or city nutrition committee to consider policies effecting the general arrangements for the demonstrations.

Responsibilities in connection with the wartime food demonstration program will include those of (a) training the demonstrators, (b) making the arrangements, (c) financing the demonstration, and (d) planning and carrying out the publicity, in addition to the actual giving of the demonstrations. The organization for these responsibilities will vary with the needs and size of the community. In some communities sub-committees already established by the nutrition committee may carry some of these responsibilities. In other communities it may be necessary to appoint a person or new committees to assume all or part of these responsibilities.** (Handbook for Food Demonstrations in Wartime for additional information in planning and conducting demonstrations.)

**Handbook for Food Demonstrations in Wartime—page 3.

U. S. NEEDS US STRONG EAT THE BASIC 7 EVERY DAY

Government food experts have adopted the "Basic 7" Food Groups as a simple guide to adequate nutrition. The importance of eating some food from each group each day should be emphasized in all demonstrations.

Group One—Green and yellow vegetables
... some raw—some cooked, frozen or canned.

Group Two—Oranges, tomatoes, grapefruit
... or raw cabbage or salad greens.

Group Three—Potatoes and other vegetables and fruits... raw, dried, cooked, frozen or canned.

Group Four—Milk and milk products... fluid, evaporated, dried milk, or cheese.

Group Five—Meat, poultry, fish, or eggs
... or dried beans, peas, nuts, or peanut butter.

Group Six—Bread, flour, and cereals . . .

natural wholegrain—or enriched or restored.

Group Seven—Butter and fortified margarine (with added vitamin A).

Plan menus so that some foods from each main group are served daily.

If certain foods are not available, or if you cannot afford them in cash or ration points, choose other foods from the same group which serve similar needs in food value and in menu planning.

THREE MEALS A DAY

A Pattern for Your Meals

Breakfast

Fruit or tomatoes—fresh, canned or dried.

Cereal—whole grain or enriched.

Bacon, eggs, sausage, etc.—if heavy breakfast is desired.

Bread and butter—whole wheat or enriched bread, plain or toasted, or hot biscuits, or muffins.

Sweet—jam, jelly, honey, syrup or molasses.

Beverage—milk for children, coffee or milk for adults.

Dinner

Meat, poultry, fish.

Starchy foods—potatoes, rice, macaroni, or corn.

Vegetables—any green or yellow vegetable.

Raw vegetable or fruit—may be used as salad or dessert.

Bread and butter—bread, whole grain or enriched.

Beverage.

Dessert—if desired.

Luncheon or Supper

Main dish—meat, eggs, cheese, dried beans or peas, cream soup or chowder.

Vegetable—cooked or raw. Grits, or potatoes if not used at dinner.

Bread and butter—bread, whole grain or enriched.

Salad or dessert—light and simple.

Beverage—milk.

THE LUNCH AWAY FROM HOME

School children and workers eating away from home should have lunches as carefully

planned as the meals at home. The lunch should furnish one-third of their daily needs. Plan lunches when you plan other meals so preparation may be made at the same time. When buying a lunch in a restaurant or cafeteria select foods which supplement the two meals eaten at home.

Follow a pattern for a packed lunch.

Box Lunch

Sandwiches, (meat, poultry, fish, peanut butter, cheese)
Hot dish (if desired)
Raw vegetable (tomato, celery, carrot sticks)
Dessert or fruit
Milk

DIET PLANNING UNDER RATIONING

Rationing may require some changes in American food habits, but we still can be well fed. The simple meal or the elaborate meal, either can be adequate. It all depends on how well they supply our needs for food in terms of energy, protein, fat, and all of the minerals and vitamins. No one food by itself supplies enough of each of these. It takes a combination of foods. And quantity as well as kind of food determines whether the diet is adequate.

When there is less of some item, use others in the same group. If all the items in the groups are scarce, choose alternates from those listed opposite the food groups. Sometimes the alternates should be combinations of foods, as no one food group may be a complete substitute.

Food groups and examples of food items in each group	When all items opposite are scarce use more of these alternates
MILK Fluid, whole or skim, evaporated, dried, buttermilk, cheese, ice cream	Cereals (wholegrain or enriched) Leafy, Green Vegetables and Eggs, soybean products, meat, fish, poultry
POTATOES Potatoes, sweet potatoes	Vegetables and Cereals (Wholegrain or enriched)
DRY PEAS, BEANS AND NUTS All dry beans, baked beans, navy, limas, pinto, soyas, dry peas, lentils, nuts, peanut butter	Cereals (wholegrain or enriched) or Potatoes and Eggs, meat, fish, poultry
CITRUS FRUIT, TOMATOES Fresh, canned, or the juices of: oranges, grapefruit, tangerines, lemons, tomatoes	Fresh strawberries, cantaloupe, green peppers, dark leafy salad greens, fresh or canned pineapple, raw cabbage
GREEN AND YELLOW VEGETABLES Kale, collards, spinach, beet tops, green beans, peas, green peppers, okra, carrots, green cabbage	Butter, oleomargarine with vitamin A added and Whole milk and yellow cheese and Potatoes, sweet potatoes, dry beans or peas and Citrus fruit, tomatoes
OTHER VEGETABLES AND FRUIT Celery, cucumbers, sauerkraut, onions, turnips, beets, corn, apples, peaches	Fruit and vegetables from the other groups
EGGS Any form, dried, frozen, fresh	Vegetables, especially the green and yellow ones and dry beans, peas, nuts or Cereals (wholegrain or enriched) and Milk, butter, oleomargarine with vitamin A added

Groups and items (Con'd)	Alternates (Con'd)
MEAT, POULTRY, FISH Beef, veal, mutton, lamb, pork (not bacon or salt pork) liver, kidney, brains, tripe, game, fowl, rabbit, deer, chicken, turkey, oysters, fish, shrimp	Eggs, cheese and Vegetables or Cereals (wholegrain or enriched), dry beans or peas, milk, eggs
FLOUR, CEREALS Breakfast cereals, breads, flour from wheat, rye, buckwheat, corn meal, hominy, rice, bakery goods, noodles, tapioca	Little danger of scarcities here. Wholegrain or enriched products are best choices
FATS, OILS Lard, other shortening, mayonnaise, salad oils, butter, oleomargarine, bacon, salt pork, drippings	Grain products, sugars, syrups, fatter meats, peanut butter
SUGARS, SYRUPS Beet, cane, corn, maple sugar, honey, molasses, syrups, jelly, jam, preserves, candy	Grain products, fats, fruit

*Diet Planning Under Rationing, Bureau of Human Nutrition and Home Economics

HOW TO GET THE GOOD FROM YOUR FOOD

HEAT . AIR . WATER
TAKE THEIR TOLL.
KEEP ALL THREE
UNDER CONTROL.

Fruits and Vegetables

1. Use fruit juice fresh . . . if it has to stand, keep covered and cold.
2. Cook fruits and vegetables in the peel if you can . . . if you must peel, make it thin.
3. Wash fruits and vegetables quickly . . . don't soak.
4. Keep fruits and vegetables cool . . . keep in nature's covering until ready to cook.
5. Cut fruits and vegetables just before using.
6. Cook fruits and vegetables in boiling water . . . with no more than needed.
7. Serve fruits and vegetables in their own juices or use juice in sauce or soup. Don't drain "pot liquor" down the sink.
8. Boiled or baked . . . Nature's jacket holds the "good" in fruits and vegetables.
9. Heat canned foods quickly . . . they're already cooked . . . use all the juices.
10. Start cooking frozen vegetables while still

frozen. Don't thaw first.

Meats

1. For a tender roast:
Use open pan . . .
No water
Moderate heat 300°-350° F.
(Tell by meat thermometer when roast is done)
Don't overcook . . . you lose juice . . . have less meat to serve.
2. Cook liver only until tender. Use moderate heat . . . no lid . . . no water.
3. To pot roast tough cuts:
Brown first . . .
Be sparing with the water.
Cover . . . cook slowly.
Cook only until tender . . .
Make gravy from drippings.
4. Use bony pieces of meat for savory soup, stew, or scrapple. Crack bones . . . cook slowly to draw out the "good".

Poultry

1. Get the good . . . from poultry.
Wash quickly . . . wipe dry.
Don't soak out the "good".
Roast tender birds at moderate heat

(300°-350° F.)

Simmer old birds until tender.

Don't make them "hard boiled".

Eggs

1. "Coddle" your eggs in simmering water. Don't boil . . . it makes the protein tough.
2. When you scramble eggs, go easy with the heat. Stop cooking as soon as thickened. Overcooked eggs "weep".

Fats

1. Get the good . . . from fats.
Keep heat moderate . . .
Don't let fat smoke and burn . . .
Burned fat is harder to digest.
2. When frying in deep or shallow fat, brown lightly.
3. Melt butter or other table fats over hot water for sauce. Don't let bubble and boil . . . the vitamins can't take it.

*Statements from series of posters "Get the Good From Your Food". Set of 10 available from Superintendent of Documents, Washington, D. C. 25¢.

* * *

A WORD OF CAUTION

For many years strenuous efforts have been made to teach housewives safe methods of conserving foods, either by canning, drying, brining, or other procedures. The methods recommended have been described in full detail and the information has been easily available to all who wished to make use of it. Moreover, ample demonstrations of food conservation methods have been conducted for the benefit of the public of all sections of North Carolina. But in spite of this far too many people have contented themselves with the use of canning methods, such as oven canning, which not only are not recommended but which may prove to be actually dangerous.

Still other home canners, doubtful of their processing methods or of the care exercised in handling their foods, have sought to compensate for the possible incomplete sterilization of foods by the use of chemicals such as salicylic acid, sodium benzoate, or some other "canning powder". In so doing they used very

poor judgment, for it may be stated without reservation that there is no satisfactory substitute for proper heat processing in canning foods whether it be in commercial canneries or at home. The inclusion of these chemicals in the human diet, either in appreciable quantities or in repeated smaller doses, is a liability to health. The use of chemicals in the canning of foods should be entirely discarded and reliance should be placed in heat processing methods which scientific studies have proved to be dependable.

Now that we have arrived at or near the end of the canning season and the time is approaching when we shall begin the use of our canned foods, a note of warning seems appropriate. Signs of spoilage of some of these foods will be so obvious by the bulging of the top of the can, by the presence of bubbles in the food, by the soft mushy condition of the substance and, perhaps, by a foul odor, that no one would ever think of eating. The unfortunate thing in such a case is the loss of valuable food.

In some instances canned food which for some reason has not been properly processed may show no sign whatever of spoilage and yet be deadly. Such is true of food containing the poison of the germ known as *Clostridium botulinus*. This germ is found on fresh fruits and vegetables and it may be present on meats and other foods. If the germ is eaten along with these fresh foods no harm is done, for it is not the germ but the poison which it produces that is dangerous. This germ contains a spore which is very hard to kill and ordinary canning methods are not adequate to destroy it. If the live spores are sealed in a can of food which is non-acid in reaction the germ will grow, even in the absence of air, and produce its deadly poison. The appearance, taste or smell of the food in no way betrays the presence in it of this poison. But fortunately, active boiling of the food for fifteen minutes will render the poison harmless and the food then may be safely eaten.

The points to be remembered about home canned foods then are these: (1) Acid foods such as tomatoes, fruits, ripe pimientos and

rhubarb are safe as far as this germ is concerned because they are acid and the germ does not grow and produce its poison in acid foods; (2) non-acid home canned foods, such as peas, corn, beans, asparagus and squash may contain botulinus poison, and all such foods should be actively boiled for fifteen minutes as soon as the can is opened and before the food is even tasted; (3) home canned meats should be classed with the alkaline, or non-acid foods and should be cooked thoroughly before tasting. Commercially canned foods—either acid or alkaline—may be considered safe without taking the precaution of boiling them.

* * *

Hints to Demonstrators

See Handbook on "Food Demonstrations in Wartime".

Newspaper articles and radio can be used effectively for publicity.

Turn to sources for recipes which you know will be good.

Test them before demonstrations.

Make use of home conserved foods in demonstrations whenever possible.

Call on local Extension Agent, O.C.D., O.P.A. and Nutrition Committee for materials that may be available in quantities for distribution.

* * *

REFERENCES

FIGHT FOOD WASTE

Superintendent of Documents, Washington, D. C.—25¢ per set of 10 posters.

GET THE GOOD FROM YOUR FOOD

Same as above.

(Cash, money order or certified check must accompany the order. Do not send stamps).

DIET PLANNING UNDER RATIONING

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Reorganization of State Board Effective September 1

By CARL V. REYNOLDS, M. D.
Secretary and State Health Officer
Raleigh, North Carolina

Reorganization of the State Board of Health designed to consolidate all administrative activities pertaining to the cooperative working relationship between the State Board and the local health units, including venereal disease control, became effective as of September 1.

This forward step was made possible through the allotment of an annual fund of \$25,000 by the Zachary Smith Reynolds foundation,

which also makes available liberal funds for the overall public health venereal disease program in the State, under which 288 supervised clinics now are in operation.

The reorganization plan now in effect is the outgrowth of recommendations made by Dr. William A. McIntosh and Dr. John F. Kendrick, who were made available by the Rockefeller Foundation to study the public health

set-up in North Carolina and point out improvements which, in their opinion, would lead to greater efficiency and more effective service to the people of the State.

One of the chief recommendations made in the report of Doctors McIntosh and Kendrick, as it affects the State Board of Health, was the establishment in the Office of Central Administration of a Division of Local Administration.

Because of the emphasis being placed on venereal control during the years immediately preceding the war, and more especially during the actual war period, it has been deemed advisable to consolidate all administrative activities pertaining to cooperation between the State and local health units.

To make the new plan effective, the State has been divided into three districts, which, generally speaking follow the lines of the three geographical divisions of the State, that is, the coastal plain, the piedmont, and the mountain area. Three directors have been designated to act in a supervisory capacity, one having been assigned to each district, in order to prevent any overlapping and possible confusion.

Two of the district offices will be located at the State Board of Health in Raleigh, and one at Winston-Salem.

The newly-appointed directors are: Dr. J. C. Knox, Dr. R. E. Fox, and Dr. J. Roy Hege. Doctor Knox will be in charge of the district comprising the eastern counties, and will have Raleigh as his headquarters. The piedmont counties will be under the supervision of Doctor Fox, who also will make Raleigh his headquarters, while the western counties' director will be Doctor Hege, with headquarters in Winston-Salem.

Each district director will have under his immediate supervision certain personnel and services now provided by the State Board of Health, consisting of the following:

1. A senior public health physician in venereal disease control.
2. Consultant public health nurses.
3. A sanitary engineer.
4. Sanitary inspectors.

5. Public health educators.

Since these district offices will be handling work in definitely-defined areas of the State, it will be necessary that there be retained in the Division of Local Administration a skeleton organization of the Division of County Health Work, formerly headed by Doctor Fox. For the time being, this organization will consist of an acting director and a field representative, with clerical assistance. The Division of Local Administration will call on the acting director of county health work and his staff for such services as they may require, and the acting director will be responsible to the State Health Officer for administrative duties pertaining to extra- and intra-State agencies as they apply to the field of local administration.

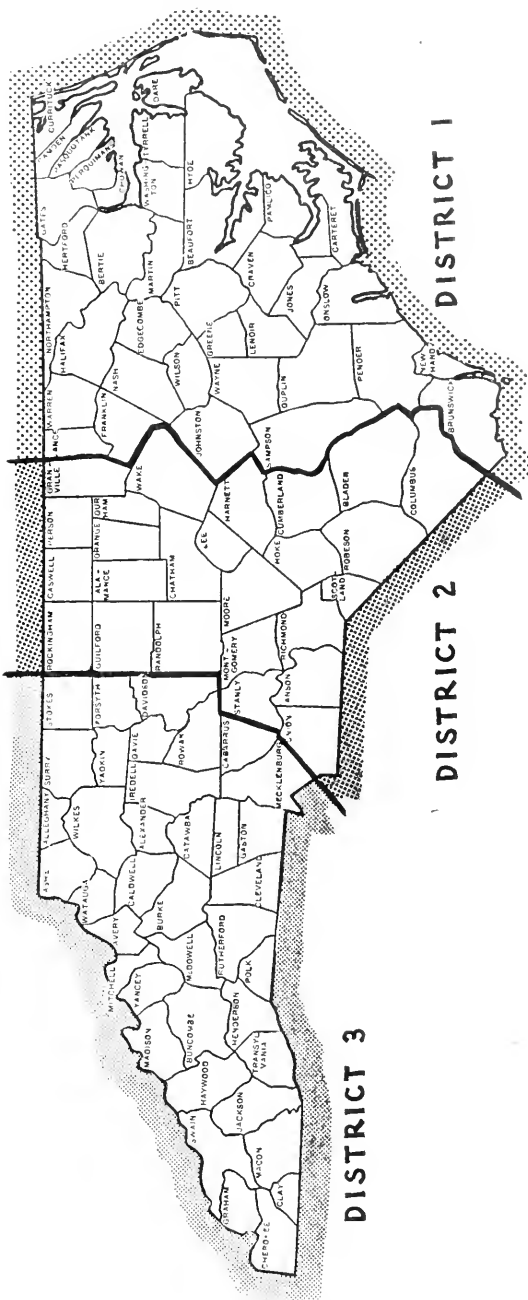
An Acting Director of Epidemiology will be responsible for the work of the Division of Epidemiology, of which Doctor Knox has been the director.

All communications from local health departments formerly addressed to the Division of County Health Work and the Division of Epidemiology, with reference to venereal diseases, should now be directed to the Director of District No. 1, 2, or 3 of the Division of Local Administration, according to the area in which the correspondent is located. The addresses of the Directors already have been given in this article.

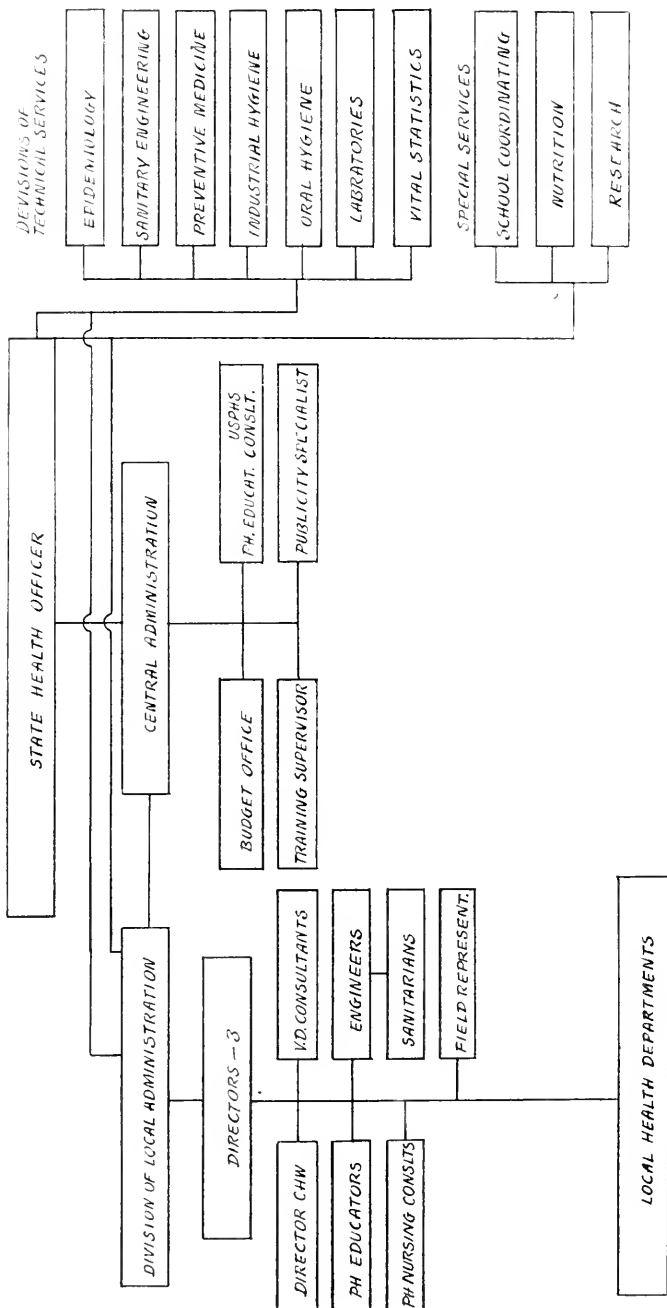
The newly-adopted procedure, while it is a departure from time-honored custom, was agreed upon as a means of greater efficiency in the administration of matters pertaining to public health in North Carolina. We believe that the wisdom of this departure will be demonstrated by results.

The reorganization plan was thoroughly gone over by the State Board of Health, the body created by the legislature to pass on public health matters in the State. The Board officially adopted the plan and directed that it be put into effect as promptly as possible.

That changed conditions call for innovations from time to time is recognized by all whose efforts are devoted to progress. We must go forward in the service of humanity and we shall do so!



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92



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The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Time Cards: Under 5 months;
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Breast Feeding.	Instruction for North Carolina Midwives.
Infant Care. The Prevention of Infantile Diarrhea.	
Table of Heights and Weights.	

CONTENTS

	Page
Medical Licensure in North Carolina	3
Women and War	5
Tuberculosis in North Carolina Industry	7
Cotton Textile Group (Table)	8
War Industry Group (Table)	9
Post-War TB Control	12
Nursing Service in Wartime	13
Notes and Comment	14

Medical Licensure In North Carolina

By HUBERT A. ROYSTER, M. D.
Raleigh, North Carolina

THE medical profession of North Carolina has reason to be proud of the establishment and perpetuation of its Board of Medical Examiners. Our State was the first in the Union to enact a law by which a duly authorized Board, elected by the State Medical Society, should determine the fitness of all those who would practise medicine and surgery in North Carolina. The first Board was elected May 10, 1859 at the tenth annual meeting in Statesville.

It is well to recall the personnel of this original Board. Its members were as follows: Dr. James H. Dickson, Wilmington; Dr. Charles E. Johnson, Raleigh; Dr. William H. McKee, Raleigh; Dr. Otis F. Manson, Townesville; Dr. Christopher Happoldt, Morganton; Dr. J. Graham Tull, New Bern; Dr. Caleb Winslow, Hertford. Dr. Dickson was the President and Dr. Samuel T. Iredell, the Secretary, although he was not a member of the Board. All honor is due these men, eminent in their day, who were chosen by the 81 doctors present out of a total membership of 180, to lead the way toward upholding the standards of medical practice in this State and set the pace for the Nation. Their names have been handed down to posterity by their direct descendants and collateral relatives, many of whom have not only graced the medical profession, but also become noted in other pursuits, even unto the third and four generations. They were distinguished alike for their char-

acter, their learning and their professional attainments.

It was not without difficulty that this first Board came into being. At least three years before its formation Dr. S. S. Satchwell, of Rocky Point, had been a strenuous advocate of a Board of Medical Examiners, but the proposal was then unpopular both with the profession and the laity. Opposition immediately developed and it was not until the 1859 session that the strong leaders of the Society were able to persuade the legislature to pass the enabling act. It is not generally known that an early North Carolina Medical Society, which existed from 1799 to 1804, appointed a Board of Censors, before whom in 1800 one Charles Smith passed a successful examination. Thus, it appears that in the earliest records of a North Carolina Medical organization which lasted but five years, not to be revived until a half-century later, an effort was made to institute some form of medical licensure.*

The original Board was composed of seven members who were elected for terms of six years each. Following this example the State Society has continued to choose the same number of members, but from 1890 to 1902 the method of election was varied. Altogether there have been fourteen Boards, including the present incumbents, whose successors are to be

* Most of the above information has been abstracted from "Early History of the North Carolina Medical Society" by the late Dr. John Wesley Long, of Greensboro. (Transactions, Medical Society of the State of North Carolina, 1917.)

ected in 1944. Actually fifteen Boards have existed, but on account of the change adopted during the twelve years noted, two of the Boards, the sixth and seventh, were classified as one. This caused confusion.

In the early 1880's some dissatisfaction was manifested in respect to a few of the older physicians, located in sparsely settled areas of the State, who had practised a number of years without taking examinations before the Board. At that time the Board had no hard and fast rules or such legal powers as it now possesses. To solve the dilemma a way was provided, by which the privilege of practicing without examination was given to those doctors who had been engaged in professional work for a definite period before the year 1885. Coupled with this sweeping provision there were enacted laws giving greater rights to the Board and firmer means of enforcing its rules. Certain minor exceptions had to be made, notably relative to the so-called temporary and limited licenses; but this and other indulgences were later repealed.

The most striking and progressive alterations in the laws governing medical licensure were made under the administration of the tenth Board. In the legislature of 1915, the first session after this Board's election, comprehensive changes were effected in the medical practice act, including: a more exact definition of the practice of medicine; elevation of the standards required for license, chiefly by eliminating graduates of inferior schools; and bestowing upon the Boards ample authority for prosecuting those who attempted to practise medicine without a license. Defining what is meant by practising medicine left no room for subterfuge by those who claimed they were selling medicines or hawking cure-alls. Raising the requirements was accomplished gradually, for the benefit of students already enrolled in medical colleges, by withholding from examination graduates of class C schools after 1916, and of class B schools after 1917, thus bringing about recognition of class A graduates only, as approved by the American Medical Association

This standard remains in vogue today. It has brought about the appearance before the Board of a high grade of applicants and an exceedingly low percentage of failures on examination. When the Board was granted the power to prosecute those who were practising illegally, the local character of such prosecutions was removed; and, it cannot be emphasized too forcibly, the statute provided that in all actions of this type the original jurisdiction should be in the superior courts. The intent of this provision was to relieve the county societies of any personal responsibility in presenting violations of the medical practice law by making the matter a state-wide offense and bringing to bear the whole power of the government upon those who would flout its authority. From 1914 to 1920 the Board followed this grant of control with several suits against pretenders and caused many of them to leave the State at a time when they were unusually rampant. Exclusion of the unfit and enlightenment of the public have liberated succeeding Boards from many of the annoyances which existed thirty years ago for want of competent jurisdiction.

From the beginning 114 physicians have served on the State Boards of Medical Examiners. Of these, 4 resigned before the completion of their service and 5 died during their terms of office. The vacancies as they occurred were filled by each Board so affected. No member of any of the Boards has ever received a salary. Out of the fees paid by the applicants each member has been reimbursed in the sum of four dollars per day for his services only while in attendance upon the sessions and for the time consumed in passing upon the examination papers. The expenses of travel to the meetings, hotel bills and other incidentals are also met by the amounts received from the applicants' payments. The Secretary, who since 1866 has been a member of the Board, is voted an honorarium each year for his executive duties and the expenses of his office. The State has never appropriated a dollar for the Board. It is a self-supporting organization, acting under State laws, but originated, developed and maintained by the North Carolina

Medical Society without any outlay of funds by the State. By statute the State confers the rights and privileges upon the Board and the Board obtains its responsibility and duties from the Medical Society, all for the safety of the people and without cost to the tax-payer.

The function of the Board of Medical Examiners, as seen in this brief outline, is two-fold: first, to pass upon the fitness of applicants to practise medicine in North Carolina; and second, to protect the people of the State from quacks and charlatans who would impose upon the credulity of the unknowing and the unthinking. Such protection is vouchsafed much more for the good of the inhabitants of the State at large than in the interest of the doctors. Naturally, as the improvement in personnel of the profession progresses, each physician finds himself surrounded by better edu-

cated and more proficient colleagues. This makes for a finer spirit and more wholesome associations within the profession. Unless the standards are kept inviolate, both the profession and the people suffer; for, no matter how low the requirements may be set, there always will be those seeking to come in who are unqualified.

Every man, woman and child in the State should be eternally grateful for our Boards of Medical Examiners, who for nearly eighty-five years have acted as guardians against imposters, and at the same time have succeeded in holding high the ideals and the qualifications of the medical profession. If it were not for this security, our State would be overrun by incompetents, from whose lack of ability and character the people would perish.

Women and War

By MARY S. BATCHELOR, Field Representative
County Health Work, State Board of Health
Raleigh, North Carolina

FOR two years America has been at war. For more than two years we have been building our defenses and raising an army. Slowly but steadily, the men of the country have been called away from their homes, families, and businesses and poured into the largest army this country has ever known—such an army as is needed for the waging of total war. There is nothing new in such a picture. During all the years America has existed the same thing has happened time after time. War came, and to it went all the manpower the nation could muster. Off to war went husbands, fathers, sons, and sweethearts, and, as in all wars, the women of the country were left to hold together and to carry on the things for which men fought. It is a big job, this of holding together and of carrying on. It was a big job in earlier wars but in this last it has grown to overwhelming proportions.

We in the South have been raised on stories of the Southern women of the sixties who kept large plantations going, in spite of every type of handicap, and who, following Appomattox handed them back to their male relatives, perhaps a little run down, not so splendid as before, but still whole and still theirs. It was a tremendous job they did. They were women of courage and strength and worthy of all the laurels that have been hung about them. They were also exceedingly wise. They accepted their individual responsibilities; knew where their first duty lay. They fought a bitter, bloody war shoulder to shoulder with the men of their homeland, but they fought from their own doorsteps with weapons they knew very well how to use. They were fighting for what belonged to them—to the women of the South individually and collectively. It is the nature of women to fight for what belongs to them and in fighting for what was theirs these

women held the South itself together through four long years of war and on through the terrible days which followed. They welded individual effort into a fighting machine which was unsurpassed. The women of the South never lost a battle!

They were fortunate in knowing exactly what was expected and required of them. Their duty was clear. They knew it was going to take the last ounce of strength and courage to do the task they set themselves to do. So, out of their lives went everything that was not pertinent and necessary to that effort. Long before "streamlining" was heard of, they streamlined their lives and got ready to carry on. They were fortunate, again, in living in a time in which it was accepted that the first duty of woman was to her home and family. It was a simple and self-evident fact. It is still a simple and self-evident fact and it is a fundamental principle of good citizenship.

However, as the years have passed, women have been expected to engage more and more in outside activities and what should be a clear picture has become blurred. To the demands of home and family have been added those of community, state, and nation, and the calls have been made so urgent and so persuasive that a great many women have found it hard to answer the question as to where their first duty lies. Since the beginning of the war they have been deluged with propaganda of the high pressure type. Much of it is justified by the extreme need but confusion has resulted and in some instances women, whose presence was indispensable at home, have left that first obligation to undertake outside work which may, or may not, have been essential, and which could certainly have been done by women without prior obligations.

We have no quarrel with women in industry nor with women in the armed forces. There is a very great need for them in all types of occupations and they are proving themselves capable, competent, and dependable. They are doing a superb job. This country would be in a serious condition if women had not answered its call for help and if they were not working steadily and well in filling vacancies caused

by the war and in releasing men to fight. They are taking the place of men in many fields. It is necessary and right that they should—if they are free to do so. Any woman who is able to take on such work is speeding the war effort immeasurably. She is doing a man's job.

But there is one fact which must be kept in mind and that is that at no time in the history of the country has a woman's job been more important than it is today. Square on the shoulders of Mrs. America has been placed the task of raising the next generation of Americans. Upon her success depends the future of the world. Square on her shoulders has been placed the job of seeing that the homefront functions with maximum efficiency. This is a big job. So big a job that no woman can fail to quake inwardly at its size, but so worthwhile that no woman can fail to want to give to it the last ounce of strength, courage, and intelligence which is hers.

Have you considered just what that job is? Have you considered the things which appear of little consequence when taken individually but which assume alarming proportions when added together? When the war began we were told that victory would be won not only on the battlefields but also on the homefront. Have you considered the fact that a breakdown on the homefront is a set back to the entire campaign?

Consider these things. Face the facts that public service has been reduced to a minimum; that the armed forces have drained the country of skilled workmen; that domestic service is apparently out for the duration; that medical and nursing service may be available only for extremely serious cases. With these facts before you, it will not be difficult to see that the average woman is forced to do a job which incorporates that of plumber, electrician, carpenter, mechanic, fireman, doctor, nurse, cook, and cleaner all within the limits of her own home. Certainly enough to fill up spare time!

Face the facts that in a land of plenty we are meeting food shortages of one kind and another since we have undertaken the task of feeding most of the world. To see that our own families are well and adequately fed

under present circumstances is a job in itself and one which requires a woman to be on her toes from early morning until night. She is required to be a fairly competent mathematician in order to balance rising prices and increased ration points against food values. She must be a first class nutritionist in order to see that her family gets the maximum of necessary foods from the limited supply on hand. She must be a chef of the blue ribbon variety in order to take whatever she can find in the markets, regardless of its quality, and exercise all her ingenuity in bringing it to the table in palatable and appetizing form.

And there is another job which is peculiarly hers. In the building of morale, accepted as a vital necessity to a fighting army, and no less necessary to a fighting civilian population, women carry a large share. The morale of the armed forces is considered so important that the whole country is organized to see that it is maintained. Are we as careful of the civilian population which needs it just as badly? We are eager to see that all types of recreation and entertainment are thrown open to the soldier, sailor, and marine. Have we forgotten the restless younger generation, keyed to a high pitch, shut off from a great many activities by their youth, deprived of many things which a peacetime adolescence would have assured? Too young to fight; too young to have a share in responsible work, but not too young to be wanting a part in a wartime world, not too young to be grasping at what dubious excitement and dangerous entertainment they can find.

This problem of youthful delinquency is increasing by leaps and bounds and its gravity is recognized by thinking people in every field. This is a problem which is directly up to the mothers of the country. They should remember that the stress of war is a potent factor in producing early maturity. The children that were thought of as babies last year are no longer babies. What they are, and what they will be, is a question which can only be answered by the women who are responsible for the formation of their characters. Vital as defense work is, somewhere there is another woman who can do it just as well, perhaps one who is able to go to that job without leaving one of greater importance. But nobody can do a parent's job as well as a parent.

War has brought to us problems with which it is difficult to cope and activities which try us to the limit. There are calls for our services which are hard to ignore. Though we have little time for ourselves, before you accept additional duties outside your own environment find time to think whether in answering such calls it makes you do a poorer job in your own particular field. Can you do both things without skimping or cheating on either. If you can answer that question truthfully in the affirmative all well and good and you, who are a busy woman, will be only a busier woman. But if the answer is negative—then stick to your first duty. Give it all you've got. Make it a success. And remember that in your own home you too are fighting for the things that are worth saving.

Tuberculosis In North Carolina Industry

By T. F. VESTAL, M. D.,
Director Division of Industrial Hygiene
State Board of Health
Raleigh, North Carolina

IN spite of continued, widespread, and well planned effort, tuberculosis remains one of our most deadly diseases. This is brought about

by a number of factors. The disease is first of all widespread, and few, if any, go through life without at some time being exposed. On

COTTON TEXTILE GROUP

Industry	No. Examined	Total Pulmonary Tuberculosis	%	Min.	M. A.	F. A.	Suspicious Tuberculosis	%	Cardiac	%	Other Pathology	%
1-C	737	10	1.4	3	7	0	4	0.5	6	0.8	12	1.6
2-C	1,411	26	1.8	18	7	1	14	1.0	6	0.4	55	3.9
3-C	479	19	4.0	12	5	2	4	0.8	3	0.6	12	2.5
4-C	867	12	1.4	8	3	1	4	0.5	2	0.2	26	3.0
5-C	1,467	24	1.6	15	8	1	7	0.5	8	0.5	75	5.1
6-C	891	13	1.5	6	6	1	8	0.9	4	0.4	56	6.3
7-C	541	3	0.6	2	1	0	3	0.6	2	0.4	10	1.8
Totals	6,393	107	1.7	64	37	6	44	0.6	31	0.4	246	3.8

HOSIERY GROUP

1-H	1,626	11	0.7	7	3	1	1	0.06	11	0.7	26	1.6
2-H	702	28	4.0	14	13	1	1	0.1	2	0.3	37	5.3
Totals	2,328	39	1.6	21	16	2	2	0.1	13	0.6	63	3.0

KNITTING GROUP

1-K	2,749	26	0.9	17	8	1	3	0.1	8	0.3	57	2.1
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TOBACCO GROUP

1-T	2,241	39	1.7	21	17	1	6	0.3	9	0.4	102	4.6
2-T	2,815	45	1.6	20	20	5	8	0.3	17	0.6	148	5.3
3-T	11,456	151	1.3	99	49	3	29	0.3	144	1.3	405	3.5
Totals	16,512	235	1.4	140	86	9	43	0.3	170	1.0	655	4.0

WAR INDUSTRY GROUP

Industry	No. Examined	Total Pulmonary Tuberculosis	%	Min.	M. A.	F. A.	Suspicious Tuberculosis	%	Cardiac	%	Other Pathology	%
1-W	735	10	1.4	4	4	2	3	0.4	3	0.4	20	2.7
2-W	528	13	2.5	6	5	2	6	0.1	4	0.8	48	9.1
3-W	1,880	18	1.0	9	9	0	0	0.0	3	0.2	49	2.6
4-W	4,370	97	2.2	50	42	5	0	0.0	28	0.6	94	2.2
5-W	1,116	10	0.9	2	7	1	2	0.2	2	0.2	30	2.7
6-W	705	18	2.6	9	9	0	4	0.6	5	0.7	38	5.4
Totals	9,334	166	1.7	80	76	10	15	0.2	45	0.5	279	3.0

MISCELLANEOUS GROUP

1-U	1,061	2	0.2	2	0	0	32	3.0	26	2.5	25	2.4
2-Con.	559	7	1.3	4	2	1	3	0.5	12	2.1	43	7.7
3-C. G.	443	4	0.9	3	1	0	1	0.2	1	0.2	42	9.5
4-Con.	929	11	1.2	5	6	0	2	0.2	20	2.2	67	7.2
5-T. C.	268	7	2.6	2	3	2	1	0.4	2	0.7	9	3.4
6-Min	1,266	20	1.6	13	5	2	10	0.8	9	0.7	257	20.3
Totals	4,526	51	1.1	29	17	5	49	1.0	70	1.5	443	8.0

Grand Totals	41,842	624	1.5	351	240	33	156	0.4	337	0.8	1,743	4.2
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the other hand, it is insidious in its onset. One may have fairly advanced pulmonary tuberculosis and yet remain on the job without being aware of any serious illness. This is especially true in times when the shortage of manpower and patriotic duty are stimulating many to remain at work when they might not do so in normal times. Industry in general is forced to use the manpower that is left after the armed forces have taken the pick of the crop. For this reason it is now more important than ever that a close watch be placed over the health of industrial employees.

Many of the larger industries have long since realized the importance of the health of their employees, and have provided medical departments, not only to select the better risks, but also to assist in the maintenance of the health and well being of these employees. This has been found to pay dividends in several ways. First, absence from work is reduced. When the employee is healthy, he turns out more work over a given period of time, he is more agreeable, and he is able to cooperate with other employees, thus improving in general the plant morale. Second, the working life of the employee is increased, and both the employee and employer are mutually and generously benefitted in the end. The well organized medical department in an industrial plant, in addition to caring for the accidents in the factory, spends a great deal of its time and energy checking on the general health of the employees. By so doing, many insidious conditions are discovered while they are yet in their early stages and are amenable to successful treatment. This is good preventive medicine. The modern industrial plant is one of the most fertile fields for this type of medical practice. And, incidentally, prevention of disease is just as fine an art as the curing of a disease already developed. Industrial medical departments are chiefly concerned with the prevention and early detection of disease conditions, and are content to leave the treatment of disease in the hands of the family physician who has for generations served so admirably in this capacity. This, we feel, is as it should be. We sincerely doubt that the family physi-

cian and his time-honored role can, or will, be replaced — notwithstanding the so-called modern high-powered clinics.

However, the greater number of North Carolina factories and shops are far too small to maintain a well organized medical unit. The greater part of our one million or more industrial employees is in these numerous small plants. The general health of this group is a real problem worthy of the best talent available. It is they who constitute the backbone of the industry of the state. Today, we find among these employees both young and old, both men and women, both educated and illiterate. Many of them are new in industry and are entirely unfamiliar with its routine and exacting demands upon its employees. Some are misfits. Some are sick to begin with. Such is the picture of the "backbone" of our industrial army today. Casualties are inevitable. We doubt that the need for medical inspection and check-up among our employees was ever greater than it is today. Of those called in the draft, the armed forces turned back, for one reason or another, about one out of four. Most of these rejections were for physical defects. The greater part of these rejectees are in industry today. Many of them can be rehabilitated and at least made suitable for efficient industrial employment. But the employer as well as the employee should know of the defect. The North Carolina State Board of Health in cooperation with the United States Public Health Service recently completed the chest x-ray examination of forty-one thousand industrial employees in industries scattered over eight counties extending from the seacoast to the top of the Blue Ridge. This survey revealed six hundred and twenty-four cases of pulmonary tuberculosis, and an additional one hundred and fifty-six cases suspicious of pulmonary tuberculosis. Not all of these are in need of medical or sanatorium treatment. All of them do need to be examined from time to time in order to detect any early spread of their trouble. Many of them were found to be spreading live active tuberculosis germs. These germs were passed on, in many cases, to the person working beside them

Thus, disease spreads insidiously, and strikes down the employee on the home front with the same devastating result as enemy gunfire strikes down the soldier on the fighting front. Trained personnel and vigilance have kept our casualties on the fighting front at a relatively low figure. We can afford to do no less on the home front. Public Health must accept this challenge and contribute its part in the solution of an enormous task. But the size of the task should serve to indicate the amount of effort necessary to be put into the job by all parties concerned. Success will be achieved only if, and when, employees, employers, public health, private practitioners, and local tuberculosis associations all cooperate and work diligently and tirelessly toward that goal.

The foregoing table shows the various plants and industries included in our recent tuberculosis case finding program. These various factories have been arranged into their respective groups in order that the groups, as well as the individual members of each group, might be compared. It should be noted that the Knitting Group shows up best with a rate of nine-tenths of one per cent, while the Cotton Textile, and War Industry Groups head the list with one and seven-tenths per cent each. While considering other pathology (other than pulmonary tuberculosis and heart condition), we find that the Knitting Group again shows up best with 2.1%, and that the Miscellaneous Group heads the list with 8.0%.

SUMMARY

Employees of twenty-five industries were given chest x-ray examinations. These industries are widely distributed over the state, and are located in eight counties. Six different types of industry are represented. Almost forty-two thousand people were examined. A rate of 1.5% pulmonary tuberculosis was found. Cardiac and other pathology was also discovered. The greatest number of tuberculosis cases were found to be in the early stage. The next greatest number was in the moderately advanced stage, and the smallest number in the far advanced stage. This is the reverse of findings on admissions to sanatoria.

AN HONOR Each year the American Public Health Association awards a Sedgwick Memorial Medal to the person who in the opinion of the Committee has rendered the most distinguished service in the field of Preventive Medicine. The award for 1943 was made to a North Carolinian by birth and early training, Brigadier General James Stevens Simmons, M. C., U. S. A. General Simmons is the Chief of the Preventive Medicine Division of the Office of the Surgeon General, U. S. Army. General Simmons was born in North Carolina in 1890. He attended Davidson College and the University of North Carolina. He received his medical degree from the University of Pennsylvania in 1915. In 1934 he received a Ph.D. from George Washington University Medical School. He secured the doctor's degree in Public Health at Harvard in 1939. Davidson College gave him an honorary Doctor of Science in 1937. Dr. Simmons entered the Medical Corps in July, 1916, serving as Chief of the Laboratory Service at the Base Hospital at Fort Bliss, Texas, and was later Commanding Officer of the Southern Department Laboratories and Chief of Laboratory Service, Fort Sam Houston, Texas. He organized and commanded the stationary overseas laboratory No. 6 at the Yale Army Laboratory School in 1918. In 1919 he was in charge of laboratory work investigating meningitis carriers and in that year became Chief of Laboratory Service, Walter Reed Hospital, Washington, D. C. He later served in laboratory positions in the Hawaiian Islands. From 1924 to 1928 he was in charge of the Department of Bacteriology at the Army Medical, Dental and Veterinary Schools in Washington, later becoming Director of the Department of Preventive Medicine in these institutions.

Although General Simmons' studies have covered a wide field, he has shown special interest in the St. Louis encephalitis epidemic and in leprosy control. He has been a member of the National Malaria Committee since 1936. He served on the American Public Health Association Committee for the Study of the Effectiveness of Typhoid Vaccination.

Post-War TB Control

By HOWARD W. BLAKESLEE
Science Editor, Associated Press

THE foundation for ending tuberculosis in the United States, and for its control in all the world, is now being laid in wartime by the U. S. Public Health Service and the National Tuberculosis Association. The outlook for success is good.

This is in face of the fact that, in long wars, tuberculosis has been a prime factor in raising the general death rate. The rise already has come in Europe. Its first signs appeared this spring in the United States, where the general tuberculosis death rate still was falling, but where an upturn came among the young.

The small American setback has an ominous counterpart in Europe, where children were affected much more than adults, particularly by the non-pulmonary types of the disease. In England and Wales, deaths among children under 10 years of age from all forms of the disease increased 45 per cent during 1941 over the 1939 figure, as compared with a 12 per cent increase for the general population. In Paris during the same period, the death rate among children from one to nine rose 28 per cent, as against only a 10 per cent increase for the general population.

As much as anything, this child threat shows the insidious ways of tuberculosis and the magnitude of the job. Because, when this war started, it was not British children but young women war workers who were expected to be hit hardest. These young women in England had been the foremost victims in World War I. An explanation suggested for the plight of American children is their mother's diversion to war work.

Certain major records favor the hope that this war can be used as a springboard to end tuberculosis. In World War I in Germany, the tuberculosis death rate rose 61 per cent, Italy, 44 per cent, England, 42 per cent, the United States, 6 per cent.

Authentic reports from Germany and Italy have not been available since the start of

World War II. Meager reports from France show that deaths from tuberculosis have increased. But England, as has been pointed out, held her increase in deaths from the disease to about 12 per cent during 1940 and 1941, and during 1942-43 the number of deaths dropped to the 1938 level, which is the lowest on record. The tuberculosis death rate in the United States during a period lacking only a few months of the duration of her participation in World War I was still dropping. Our 1941 death rate was an all-time low of 44.4 per 100,000, probably will be about 43 for 1942, and this year to date is down 5 to 5.5 per cent further.

There are many angles behind this hopeful side. But the main weapon by which Americans propose to drive tuberculosis from the land is the chest X-ray. And particularly the way this detector is being used. The selective service employs it on draftees. State after state, and county after county, are following up the men deferred or rejected on account of tuberculosis.

The U. S. Public Health Service and state tuberculosis organizations are extending the chest X-ray to war industries. The Public Health Service has at least a score of photo units at work this year for industry. The same follow-up to induce medical care is used as in the selective service.

The Public Health Service is extending its offer of service to families of workers found to be tuberculous. The War Emergency Committee of the National Tuberculosis Association has recommended to local tuberculosis associations many measures, including special attention to women employees and emergency housing conditions.

Tuberculosis is coming to light in a great sector of the population where it was never before searched out on a large scale. The magnitude amounts to something new in this great health battle.

Nursing Service In Wartime*

NURSING service "as usual" is gone for the emergency. The armed forces have a priority on nurses. The remaining nurses must be utilized for all non-military governmental agencies and essential civilian nursing services. The private duty nurses available in the country constitute a small group and there are numerous calls upon them for a wide variety of services. "Luxury" nursing is certainly out for the duration. The nursing section of the Procurement and Assignment Service for Physicians, Dentists, Veterinarians, Sanitary Engineers and Nurses urges that private duty nurses not eligible for military service should be utilized for the care of acutely ill patients, first, in hospitals and, second, in homes. Every nurse should be used on the highest level of skill of which she is capable. A private duty nurse should be assigned to the care of a single patient only when it is impossible to arrange for adequate care by using a part of the service of a nurse who is attending also to other patients. In homes private duty nurses should be employed only when it is impossible to provide enough care through such facilities as are offered by the visiting nurse associations and the hourly nursing services. Another important civilian need is the work of private duty nurses in positions on the staffs of hospitals. Also there are such places as those associated with public health nursing agencies, industry and physicians' offices.

The superintendents of hospitals might give further serious consideration to their utilization of personnel. The tendency should be to utilization of nurses almost wholly by assignment to large groups of patients. The nurse's duties should be evaluated so that the major portion of her time is used in actual nursing care rather than in the serving of meals or in other duties which may be performed by nurses' aides or any of the other auxiliary services that have been developed. In some hospitals already the practice is developing to assign a nurse to the care of a single patient

only on the recommendation of the physician in cooperation with the superintendent of nurses and the superintendent of the hospital.

The work of nurses in industry is of increasing significance. The Procurement and Assignment Service has established criteria of essentiality for nurses in industry. Such nurses will not for the present be urged into military service. A nurse who is an industrial nursing consultant, or a state or city health department or a labor department nurse, a supervisor, a staff nurse who is working full time at professional nursing duties or a nurse who is the only full time nurse in an industry, will be considered for the present essential. However, nurses in industry will be expected to limit their activities to professional nursing duties connected with the medical department of the industry with which they are associated. Industries will be urged to utilize existing community service for nursing care if those resources are adequate to meet the needs. Furthermore, industry is urged to avail itself of nonprofessional technical aides whenever possible.

On the medical profession particularly rests the special obligation to utilize the services of nurses in the doctor's office only when absolutely necessary. In each community a local committee of nurses has been established which is to advise in determining offices that need professional nursing services. Physicians who employ a nurse without actual need are requested to release such nurses for use in essential nursing service and to employ other personnel instead. It is realized that the practices of physicians remaining in civilian service have in many instances increased so greatly that there is more need now for efficient office nurses than previously. Even under such circumstances, however, the employment of a nurse not eligible for military service may release an eligible nurse for the armed forces.

Since the Red Cross is charged with the recruiting of nurses for the armed forces,

* Editorial from—The Journal of American Association

attention might well be given by that organization to the extent to which the nurses now employed by the Red Cross in this country are replaceable by nurses' aides or other partially trained personnel. This applies particularly to the employment of considerable numbers of nurses in blood banks, in teaching of nurses' aides, in mobile units and in other activities in which their time does not seem to be, in many instances, wholly utilized.

The problem of supplying nursing personnel has become for the present even more acute than the problem of providing physicians. Under the auspices of the Procurement and

Assignment Service for Physicians, Dentists, Veterinarians, Sanitary Engineers and Nurses a number of procedures are in contemplation which it is hoped will yield the names of every woman in the country ever qualified as a nurse and capable now of being drawn into nursing service. These plans will be announced as rapidly as they are developed. In the meantime a complete enrollment of young women in the U. S. Cadet Nurses Corps and serious consideration to the suggestions here made for the employment of available nurses will do much to help the rapidly growing crisis in the profession of nursing care.

Notes & Comment

By THE ACTING EDITOR

OUR FRONT COVER

THE Eastern North Carolina Sanatorium, located near Wilson, is a new institution which increases our facilities for combating tuberculosis. This picture, taken only a few weeks ago, indicates that the buildings are new; driveways, although laid out, have not been surfaced, and the grounds still lack landscaping. These improvements will be made within a short period of time. With the coming of peace it is expected that another wing will be added, thus giving a balanced appearance to the main building. At present the institution houses 185 patients, one-half of whom are negroes. The sanatorium is located on a 125 acre tract of land, one mile from Wilson. When this site was selected we had most encouraging demonstration of the change in public opinion concerning tuberculosis. When institutions for the treatment of tuberculosis were first being constructed around the turn of the century, they were unwanted institutions. Inhabited communities were afraid of them and protested against their location, except in uninhabited localities. People feared that a tuberculosis hospital would be a source of infection and danger. As a people, we have since learned

that tuberculosis is not spread by mysterious ways and that the person with tuberculosis is not necessarily a menace to society. When it was proposed that we have a tuberculosis sanatorium in the Eastern part of the State to supplement the facilities at the Sanatorium and Black Mountain, there was keen competition among the towns of Eastern Carolina as to which one could secure this new institution. The city of Wilson made the most attractive offer and was selected as the site of the new institution. Thus we have new evidence that a well informed public is essential to a successful campaign against infectious diseases.

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MEDICAL HISTORY

Dr. Royster has given us a glimpse into the medical history of North Carolina in his account of Medical Licensure in this State. In these days when medical progress is so rapid we are altogether too prone to feel that all accomplishment in the field has been made within the last few years. The State owes a debt of gratitude to the medical statesmen of yesteryear. These intelligent, conscientious, farseeing men provided the foundation upon which a superstructure could safely be built. It took years of patient planning and endeavor

to provide the mechanism whereby adequately trained physicians could be licensed to practice in the State and the people of the State protected against the incompetent, the charlatan and the quack. Although changes have been made from time to time in the method of selecting the Board of Medical Examiners and the method of conducting examinations, the original plan was so fundamentally sound that none of these changes were radical or upsetting. The State Board of Medical Examiners has earned and now commands the respect of our General Assembly. Today it is regarded as a permanent institution.

* * *

WOMEN IN THE WAR Miss Batchelor has called our attention to a problem which is fundamental. She has challenged us to evaluate the problems of our time. Many will have no difficulty in determining which things should come first. Apparently some are perplexed or at least confused in their thinking in determining which of several courses is most important.

In August of this year our civilian labor forces reached a total of 54,800,000—of this number 17,100,000 were women. Women in industry are not a novelty—they were in war industries, making parts for muskets, in the sixteenth century. Even though women have done men's work for a long time and even though there have been an increased number of women working for salaries or wages, we have never before had the experience of so large a number of women in industry. This large influx of women workers has complicated the problems of industry. In many instances jobs were fitted to the women—hours of work were regulated, rest periods were provided, special clothing and caps were designed to prevent accidents and there were other inducements, such as day nurseries for children. Many social adjustments were made in a matter of a few months which have taken years in normal times.

A vast majority of the 17,000,000 women in industry at the present time have under-

taken their new activities with the most laudable of motives. Many have given up their own comforts to aid in the war effort. A great many of these women had no home responsibilities. In taking up war work, they were making a most valuable contribution to the success of our war effort. To these women we owe a deep debt of gratitude. Unfortunately, a considerable number of these 17,000,000 women have deserted their homes and left their children to look after themselves and in so doing they have neglected their highest responsibility in order to respond to emotional appeals or to their selfish desire to earn easy money. A woman who deserts her home and neglects her children is not aiding the war effort—no matter how many pieces of munitions she fabricates in the shop. It is for the home that our men are fighting. Our newspapers have recently carried some distressing information. Edward C. Kennelly, Special Assistant to J. Edgar Hoover, Director of the Federal Bureau of Investigation, has stated that arrests for girls under twenty-one years of age rose 64% in the first six months of 1943 compared to the corresponding period of last year and that juvenile delinquents arrests among girls in 1942 rose 55.7% over 1941; Drunkenness rose 39%; disorderly conduct, 69%; prostitution and commercial vice, 64%. These are ugly figures. We do not like to face them but here are figures from North Carolina which are uglier. In 1942 there were 16,713 new cases of syphilis reported in North Carolina—2,742 of these were young people between the ages of ten and nineteen. Here is tangible evidence that homes are being neglected. It is in the home that young people are given the standards which guide their conduct. The father should not leave to the mother the entire responsibility for guiding the lives of their children. This should be a joint responsibility. In the American home, however, the American Mother has much at stake. She should give most thoughtful consideration to determine what is her first duty and then have the courage to follow the dictates of her conscience.

TUBERCULOSIS IN INDUSTRY

To examine 41,842 people is a big accomplishment. Dr.

Vestal and his associates in the Division of Industrial Hygiene have examined this many people in twenty-five North Carolina industries. The data which he presents is new information. Although the discovery of 624 patients with tuberculosis is disconcerting and makes us pause in a moment of reflection, it does give us considerable encouragement which shows that we are making progress. We cannot fight an enemy whose whereabouts is unknown. Infectious disease is an unrelenting enemy. If we know where it is and know something of its numerical strength, we can direct our efforts against it intelligently and combat it effectively.

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HEARING DEFECTS

We have paid so little attention to hearing defects in North Carolina that we must

focus our attention on far-away states in order to get any intelligent information concerning the prevalence of this handicap. The State of Oregon has studied its hearing problem among its school children. In 66,060 unselected children, hearing defects were found in 2,933 or 4.4%. The incidence of hearing defects ranges from 2% in one county to 3% in six counties, 4% in 12 counties; 5% in eight counties and 6% in three counties. Just how many children with defective hearing we have in North Carolina will be determined someday when our health program becomes better balanced. In Oregon they have done more about hearing defects than just find them. They have encouraged people with these defects to be treated. Fifty-eight percent of those who saw physicians improved significantly in their hearing as compared to only 28% who improved without securing medical attention.

NEWS RELEASE

Dr. Carl V. Reynolds, State Health Officer, has announced the appointment of J.M. Jarrett as director of the State Board of Health's Division of Sanitary Engineering, effective August 10. He succeeds Warren H. Booker, who recently retired, after serving in that capacity since 1931.

Mr. Jarrett, a native of Asheville, graduated from the Asheville High School and the North Carolina State College, as a civil engineer, in the class of 1926, with the degree of B.S. He has been with the United States Public Health Service, as a sanitary engineer since November 14, 1942, on duty at Norfolk, with rank of Major. At Dr. Reynolds' request, he was relieved of his duties by Surgeon General Thomas Parran, in order to accept the vacant post with the State Board of Health.

"With a long record of efficient service, Mr. Jarrett comes back to the State Board of Health, with which he formerly worked as consulting engineer and, later, principal sanitary engineer, fully equipped for the duties of his new post," Dr. Reynolds said, in making the announcement. "For a while," he continued, "he was superintendent of the water department of the town of Southern Pines. He was later sanitary engineer with the Georgia State Health Department and held a similar position with the United States Indian Service, with headquarters at Albuquerque, New Mexico. For a time he was employed as a regional consultant with the United States Public Health Service and was stationed in Washington. This will make his third connection with the North Carolina State Board of Health. He was released to the United States Public Health Service last fall and now returns to head one of the most important Divisions we have."





